Naval War College Review

Volume 25
Number 7 *September-October*

Article 14

1972

September-October 1972 Review

The U.S. Naval War College

NAVAL WAR COLLEGE REVIEW

Sept - Oct 1972

hat a society gets in its armed services is exactly what it asks for, no more and no less. What it asks for tends to be a reflection of what it is. When a country looks at its fighting forces it is looking in a mirror: if the mirror is a true one, the face it sees there will be its own.

SIR JOHN WINTHROP HACKETT
1962 LEES KNOWLES LECTURES

NAVAL WAR COLLEGE REVIEW

FOREWORD

The *Naval War College Review* was established in 1948 by the Chief of Naval Personnel in order that officers of the service might receive some of the educational benefits available to the resident students at the Naval War College. The forthright and candid views of the lecturers and authors are presented for the professional education of its readers. Lectures are selected on the basis of favorable reception by Naval War College audiences, usefulness to servicewide readership, and timeliness. Research papers are selected on the basis of professional interest to readers. Reproduction of articles or lectures in the *Review* requires the specific approval of the Editor, *Naval War College Review* and the respective author or lecturer. *Review* content is open to citation and other reference, in accordance with accepted academic research methods. The thoughts and opinions expressed in this publication are those of the lecturers and authors and are not necessarily those of the Navy Department nor of the Naval War College.

The editorial offices of the *Naval War College Review* are located at the Naval War College, Newport, R.I. 02840. Published bimonthly, distribution is generally limited to: U.S. Navy, Marine Corps, and Coast Guard commands and activities; Regular and Reserve officers of the U.S. Navy, Marine Corps, and Coast Guard of the grade 0-4 and senior; military officers of other services, foreign officers, and civilians having a present or previous affiliation with the Naval War College; and selected U.S. Government officials. Correspondence concerning *Review* matters should be directed to its editorial offices.

CONTENTS

Volume XXV, Number 1/Sequence Number 239 September-October 1972

ANNOUNCEMENT FOR NAVAL WAR COLLEGE REVIEW SUBSCRIBERS

Commencing with the first issue of volume 25 (Sept-Oct 1972), The Naval War College Review will be published on a bimonthly schedule:

SIX ISSUES YEARLY

CHALLENGE !

In this, my first appearance on these pages as the thirty-sixth President of the Naval War College, I intend to devote my remarks to the personal sense of mission and commitment I bring to this challenging new position. The Naval War College has—traditionally and historically—been a source of new concepts within the Navy. Its role in times of change or transition such as we are experiencing today is absolutely vital. No great institution can afford to become static. In an era of growing responsibilities and diminishing resources, I consider it imperative for the Naval War College to be a dynamic, responsive, innovative center of creative scholarship and thought.

In preparing our carefully selected officer students to be the leaders of tomorrow, we have three principal tasks—sharpening their professional competence in the field of naval science, intensifying their awareness of the social and economic forces which shape the world, and giving them the intellectual tools that they will need in the future as well as today. As the rate of expanding knowledge inevitably accelerates the rate of change in our national and international society, it is essential that the Navy develop imaginative and broadly versatile officers who can function confidently in any environment—strategy, management, or tactics.

These three fields—strategy, management, and tactics—are the cornerstones of our newly refocused curriculum. The revised curriculum will require a great deal of reading, debate, inquiry, and individual research. The emphasis will be on methods of teaching that will develop the student's ability to think logically, to place issues in perspective, and to establish criteria for making choices, or decisions. We will study fewer things, but those which we address will be examined in depth. The hallmark of our approach will be its intensity rather than its scope of facts.

In anticipation of the contributions our students will make in the areas of original thought, I have altered the publication schedule of this *Review* to an issue every two months rather than every month, in order to free funds for the publication of student monographs and other papers.

I am also seeking, in every way, to encourage an atmosphere of academic freedom here at the Naval War College. True scholarship cannot exist in an ivory tower and to equip our students for effective performance in any future

environment, we must expose them to the challenge of controversy, the rigor of opposing views, and the needs of a changing society.

In summary, the Naval War College must continue to be an exciting place for students and professors alike and to keep it that way we must adapt to the changing demands of our society and our profession. I am determined that our scholarly undertakings will provide the stimulus for innovative ideas and perceptive insights. There may be another Alfred Thayer Mahan in this year's class or the next. We cannot afford to miss him.

STANSFIELD TURNER
Vice Admiral, U.S. Navy
President, Naval War College

Despite the popular notion that the United States will never again become actively involved in wars similar to the Vietnamese conflict, U.S. military forces almost certainly will be called upon to assist allied governments in dealing with future insurgency problems. The American experience in Vietnam can prove to be useful in the long run, but only if all aspects of the military and political program there are reviewed critically and past deficiencies in planning and execution are remedied. On the military side, the fundamental principles of logistics, long known but tragically disregarded in Vietnam, must be reexamined and put into operation if America is to retain her Armed Forces as a viable tool in support of foreign policy aims in the future.

COMBAT SUPPORT IN WARS OF NATIONAL LIBERATION

An article

by

Lieutenant Colonel Harold D. Gallagher, U.S. Army

College of Naval Command and Staff

> It is easier for a camel to go through the eye of a needle than for a rich man to enter the kingdom of God.[1]

Introduction. For two decades political and military leaders have been debating the various aspects of intervention by external powers in wars of "national liberation" in underdeveloped nations. Ex-colonial powers, such as France and Britain, have been successful only in delaying nationalist revolutions in their former colonies. Moscow and Peking are ever vigilant, hoping to realize political gain from such conflicts. The United States has participated to varying degrees in a number of these struggles during the past 50 years (e.g., China, Cuba, Congo, and Vietnam), but with little apparent success. Perhaps a rich nation, attempting to resolve a so-called war of national liberation in an underdeveloped country, has the same degree of difficulty as the proverbial rich man attempting to enter God's kingdom. The rich nation, like the rich man, is detracted from basic mission essentials by its dependence upon material wealth and the trappings of affluent living. This dependence on material luxury appears to degrade the efficiency of American military power and, as Mao Tse-tung points out, separates the affluent American from the poverty-stricken masses of the developing nations.[2]

The American operation in Vietnam produced many controversial questions in the fields of political and military

strategy. The basic political decision which committed the United States to preventing South Vietnam from falling into Communist hands, however, is not at issue here. Rather we shall concentrate on determining the effects of the relatively high U.S. logistics support level upon U.S. combat effectiveness as well as on the economic, sociological, and political stability of South Vietnam.

Once the decision was made by the Government to apply force in Vietnam, the military's task was to optimize its contribution to the attainment of overall U.S. strategic objectives. While the primary concern of the military planner, commander, and soldier is to accomplish the assigned mission, a secondary, yet integral, concern remains—that of achieving the greatest results for the lowest possible expenditure of national resources.

The problem of the logistics snowball is as old as mankind. The snowball's epidemic growth in Vietnam, however, dictates that it be controlled if the United States is to remain as an effective force in world affairs. Although current American political attitudes seem fixed on avoiding future Vietnam-type conflicts, U.S. commitments abroad and the inclination of nations throughout the world to resort to violence when confronted by seemingly insoluble problems will inevitably act to drag U.S. military forces into future limited war situations. This, if for no other reason, is sufficient cause justifying continued study of all aspects of the American involvement in Vietnam.

History is replete with the failures of armies that neglected the principle of economy. The critical nature of timing on the battlefield favors the army that can and will carry the fight with a minimum of nonessentials. Logistics has been defined as military economics, and, in fact, the fundamental principle of logistics is economy. Resources, which create military power, are always limited. Thus, from the logistician's perspective, the key to the effective employment of military force is the efficient utilization of resources. The need to apply this principle of economy to combat support operations is especially critical because of the inherent tendency of logistic and rear area activities to snowball out of control.

> . . . all logistic activities naturally tend to grow to inordinate size, and unless positive control is maintained this growth continues until, like a ball of wet snow, a huge accumulation of slush obscures the hard core of essential combat support and the mass becomes unmanageable. This snowball effect permeates the entire structure of military organization and effort. It applies both to personnel and to material, . . . [3]

The inordinate growth of combat support activities is caused by forces internal and external to the logistical support system. The first of these forces is the lack of complete and detailed planning for the logistics resources required to support combat operations. Priority for planning is quite naturally directed toward the primary combat mission, and residual planning resources are usually not adequate to fully research and develop coordinated logistics support plans. Once the tactical battlefield plans are considered workable in detail, it is assumed that the logistics system—backed by America's wealth and industrial power—is capable of the required support. Therefore, *precise* estimates of logistical requirements to support tactical and strategic plans often receive insufficient attention.

The next consideration is the twin force of *inertia* and *momentum* that operates directly upon the physical logistics system. The logistics pipeline extending from the civilian production sector in the United States through the various levels of military logistics to the G.I. in the field is difficult to establish, prime into action, and often even more

difficult to regulate. The inertia inherent at the onset of new military logistical operations detracts from initial operational scheduling and performance of combat forces, thereby tending to create artificial requirements as the consumer at the end of the pipeline seeks to overcome the seemingly unresponsive logistical system. If this response lag, resulting from inadequate planning and inertia, continues for more than a few months, confidence in the system is destroyed and requirements are further exaggerated.

As the inertia and planning voids are overcome, the overstimulated system satisfies actual requirements plus the exaggerated demands placed upon it by the frustrated consumer. Not only are supplies for the combat forces in excess, but the support facilities and personnel usually snowball significantly beyond mission essentials, thereby placing undue strain on both the logistical system and combat operations. Such was the case in the European theater during World War II.

> The theater piled up stuff until operations were impeded by the surplus. In the end the tonnage became so high that the handling of it from factory to front line must have cost the U.S. many combat divisions. And for what result? Depots and dumps grew steadily larger and more unwieldly. They were so continuously swamped from the rush of stuff arriving that they didn't know what they had, or if they did they couldn't even find it. The consequence was that special missions would fly back to the United States to plead for more ammunition or more QM supplies. So the depots became still larger and still more unmanageable as still more stuff was shipped, only to be lost again amid the accumulation.[4]

Logistics Snowball in Vietnam (1965-1970). Despite the fundamental and enduring principle of economy in logistics, the military logistician's goal in Vietnam was to satisfy the requirements of the combat forces facing the enemy, regardless of cost.

> The following statistics indicate the scope and magnitude of logistic support operations in Vietnam during the period 1 January 1965 to 1 January 1970: . . . Free World Military Assistance Forces supported in Vietnam totaled over 1 million men, including more than 550,000 U.S. forces . . . Over 17 million short tons of dry cargo were shipped by sea and over 750 thousand short tons by air . . . 163 millions of barrels of POL products were consumed in Vietnam . . . A massive $4 billion construction program was accomplished.[5]

The total cost for these 5 years is difficult to calculate, but it has been estimated at $120 billion.[6] In comparison, estimates of the dollar cost of the Korean war appear to be substantially smaller. "On the basis of data prepared in the Statistical Analysis Section, Supply Planning Branch of G-4, Office of the Comptroller of the Army estimated the total cost to the Army of operations in Korea for the period 27 June 1950 to 30 June 1953 to be about $17,200,672,000."[7] Generally the support concept for Vietnam was to satisfy the stated requirements of the field commanders. It appears that initially there was little planning guidance or follow-on command pressure to restrict the introduction of nonessential functions, personnel, or material into the combat zone. This proliferation of nonessentials in the Vietnamese war was addressed by A.H. Katz in a recent article when he observed that:

> Our ability to deliver large amounts of materiel and men over large distances at low costs causes

> us to do just that. No one can beat us at our game . . . at the period of maximum U.S. presence in Southeast Asia, we were shipping about ten times as much to the post exchange system as the upper estimate (a hundred tons per day) required by the VC/NVA forces to fight the war! We are better at a game that the other guy isn't playing.[8]

This analysis by Katz is substantiated by published figures on the quantities of selected materials moving into Vietnam during the peak war years as compiled by the Joint Logistics Review Board.

Figure 1 shows a relatively sharp increase in the tonnage of Class VI-Personal Demand (post exchange) items shipped to Vietnam as compared with other selected classes of supply. The growth in these class VI items expanded in 2 years from 640 to 1,300 tons per day and approximates the 1,000 tons per day figure referred to by Katz.

As has so often been the case in earlier wars, the logistic pipeline to Vietnam in the first stages of the massive American buildup resulted in serious bottlenecks which restricted the flow of essential supplies to combat units in the field. The record of support operations in the Central Highlands was typical of this early inertia. The support for the four Highland provinces flowed through the seaport of Qui Nhon and then over a highway network to An Khe, Pleiku, Kontum, Phu Cat, and

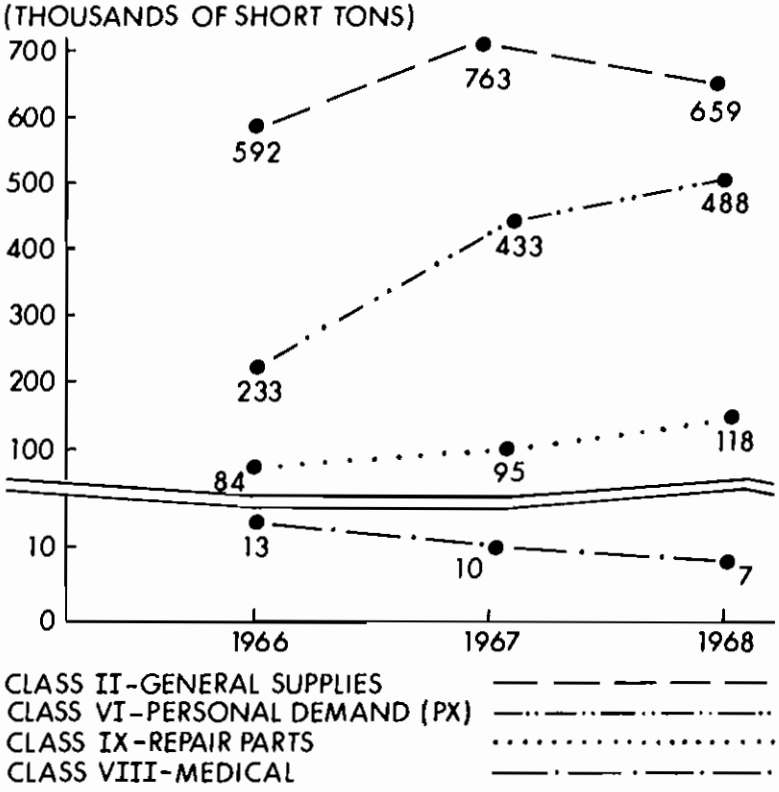


Fig. 1—CONUS-to-RVN Dry Cargo Sealift Movements (1966-1968)

Source: Joint Logistics Review Board, *Logistics Support in the Vietnam Era: Transportation and Movement Control,* Monograph 18 (Washington: 1970), p. A-32.

Bong Son. A logistics support command was activated in CONUS and phased into Qui Nhon during 1966 to support four U.S. divisions in the Highlands. The tonnage requirement through Qui Nhon to support this operation approximated 4,000 short tons per day, but the initial capacity of Qui Nhon's "over the beach" operation was less than 1,500 short tons per day. By September 1966 over 30 ships (115,000 short tons) were backed up and awaiting discharge while additional ships destined for Qui Nhon were being held in the Philippines and Okinawa. Although engineers and construction personnel assigned to upgrade the region's highway network were already ashore in Qui Nhon, their equipment continued to be stacked up in waiting ships. Thus, in addition to the expected inertia plaguing the logistics pipeline into the Central Highlands, the flow of supplies reaching the troops was further restricted at the beachhead as a result of faulty planning. Qui Nhon's new deep-draft DeLong piers were finally completed in 1967, increasing the port's offloading capacity to 6,000 tons per day, but by this time the bulk of the buildup had already been completed. Consequently, much of this additional, permanent capacity would never be fully utilized. The early response lag in the logistics system forced the consumers at the end of the pipeline to pad their requirement estimates in an effort to insure adequate ready stockpiles of essential material. No positive system of control existed to effectively limit this artificial elevation of requirements.

The artificial expansion of requisitioned material was especially applicable in the case of ammunition where the in-country stockage snowballed from 4,000 tons in 1965 to nearly 300,000 tons in 1967.[9] This huge stockpile of ammunition was scattered throughout the country in overcrowded and largely uncovered storage areas. A single incident at the Da Nang storage site resulted in the loss of 39,000 tons of ammunition, valued at nearly $100 million.[10] Numerous similar incidents—caused by accidents and enemy action—between 1966 and 1970 resulted in substantial U.S. tonnage and dollar losses throughout South Vietnam. In 1969 this excess stockage situation was finally recognized, and in-country ammunition stocks were reduced by nearly 50 percent while effectively supporting the same level of combat operations.[11]

The construction program was also plagued by poor planning with nearly a billion dollars a year being invested in permanent U.S. facilities during the first 5 years of the Vietnam buildup. Among those items built during the first 5 years of the war there were:

> 7 deep-water ports with 27 berths . . . 12 runways at eight major airbases with 200 small airfields and 200 heliports . . . 11 million square feet of covered storage . . . 1.8 million cubic feet of reefer storage . . . 8,250 hospital beds . . . [plus] major tactical bases, communication sites, roads, bridges, POL storage and pipelines, administrative facilities, etc.[12]

Besides this construction effort, supporting facilities such as post exchanges, officer and enlisted clubs, swimming pools, television stations, and many other nonessential facilities (usually with air conditioning) were injected into the construction requirements and completed.

Although it took about 2 years to meet needed storage facility requirements, construction did not cease once they were met. An excess capacity (with the marked exception of covered ammunition storage) was quickly achieved. The momentum of facility construction was so strong that even though the port of Qui Nhon was operating at only a fraction of its capacity and scheduled for substantially lower requirements after Vietnamization, two additional

LST ramps of permanent design were pushed to completion in 1970. Since initial planning generally did not include any extensive consideration of their possible usefulness after the war, the location and design of many of these permanent facilities may tragically doom them to ornamental status and ultimate decay in a nation starved for public capital.

The American fighting man in Vietnam was fed better than any combat soldier in the history of warfare. Every effort was made to provide food and facilities equal to those back home. Traditional field canned rations were quickly replaced with fresh foods (e.g., milk, ice cream, fruits, vegetables, and bread). The million dollar cold storage facilities constructed throughout South Vietnam are monuments to the elaborate U.S. subsistence system. The extent to which these operations were carried is illustrated by the commander of an Army infantry brigade, operating in the vicinity of Duc Pho, who stated that his only significant logistics problem was that the ice cream being lifted by helicopter to his field combat units was too soft by the time it was consumed by the troops. This situation was quickly remedied by the undaunted supporting logistics task force which employed dry ice portable freeze containers to keep the ice cream hard while in transit from the field ice cream plant to the troops. Dry ice was supplied each day via air or sealift from the new U.S. dry ice plant in Qui Nhon. Since the Vietnamese will probably retain their present system of live meat and local procurement of food, these cold storage facilities left behind in the U.S. withdrawal should be of little lasting value to the nation.

A new philosophy of human motivation which has come to pervade the United States during the past two decades suggests that children and young adults can be pacified and motivated most effectively by providing them with a substantial mix of material consumption and entertainment. This approach when applied in Vietnam held that morale, motivation, and thus performance would be the products of the right mix of post exchange items, air-conditioned facilities, special services activities, and club entertainment. The permanent Senate Subcommittee on Investigations, chaired by Senator Ribicoff, in concluding its 3-year "PX Investigation" stated that the military services had apparently accepted:

> . . . the notion that American soldiers in combat zones should be offered such luxury items as diamonds, precious stones and furs in their exchanges . . .. Vietnam was a war zone subject to all the problems American armies have faced in previous wars, but the lessons of the past were lost on post exchange planners as tons and tons of luxury items were brought into the country.[13]

If no other lesson is learned from Vietnam, certainly the folly that a high-level personal consumption creates high motivation and morale will be challenged. The tragedy of this, however, is that we did not need the Vietnam war to illustrate this point. A reexamination of similar evidence in the Korean war moved one observer to write:

> Two concepts of morale are almost continually in opposition . . . The concept of soda fountain morale is that high military morale is created or at least greatly stimulated by luxuries, privileges, and fringe benefits . . .. The concept of weapon morale is that high military morale is developed primarily by rigorous discipline, hard training, confidence in one's leaders, one's weapons, one's ability to use them, and above all by pride in one's ability to accept great risk and hardship . . .. Weapon morale is unpopular and difficult to attain,

but it stands the test of fire. For example: In the retreat from the north border of Korea in late 1950, some units with soda fountain morale abandoned not only their weapons but also their wounded. At the same time other units with weapon morale brought back their weapons, their wounded, *and their dead.*[14]

There were many cases in Vietnam which indicated that morale, esprit de corps, and performance were significantly improved when a unit was moved away from a soft support area to the field. For example, in 1967 a battalion-size logistics task force composed of units and men from the rear was landed on the beach at Duc Pho to support combat brigades operating in the area. There were no post exchanges or clubs on that beach—only sand and the bare essentials of life. In addition, each man worked 12 to 16 hours every day of the week in high tropical temperatures and humidity, yet the morale and performance of these men were significantly higher in this field environment than they had been in the rear areas. In the unanimous opinion of the officers of these units, the challenges of the mission and the austere environment had provided the uplifting forces leading to improved morale and motivation.

Military Consequences of the Vietnam Snowball. The effective application of U.S. military force in Vietnam has been hindered by both military and political factors, making it difficult to establish a quantitative relationship between the support concepts in Vietnam and the effectiveness of U.S. military operations in Southeast Asia. Nevertheless, the subjective nature of this cause and effect relationship should not preclude analysis. If the frustration and waste of Vietnam are to be reduced in future conflicts, military men must carefully analyze the logistical weaknesses that reduced their effectiveness—both in operations and in the development of strategy itself.

In reconstructing the Vietnam experience for analysis, both the cumulative size of the overall support operation as well as detailed accounting of specific functions are relevant. Specific analyses of various support operations, such as the post exchange system and permanent facility construction, contributes to an understanding of the internal effects on in-country military operational effectiveness while overall cost and resource analysis may serve as indicators of the war's effects on the U.S. global defense posture. The snowball effect of logistics will always be a restricting factor on military operations, but, hopefully, the crippling effects of the expanded Vietnam snowball can be substantially reduced in the future by applying the lessons contained in the Vietnam experience.

The decision in 1965 to inject 350,000 U.S. troops into Vietnam precipitated a monumental logistics problem, as detailed by the Joint Logistics Review Board:

> By 31 December 1965, 184,000 troops had been deployed in-country and were being supported adequately, although not at maximum efficiency. One hundred and twenty-two ships were loaded with cargo and awaiting discharge in Vietnamese waters. In addition, a substantial number of ships were held up in anchorages in the Philippines, Okinawa, and other locations. Cargo was beginning to overflow in the depots, and masses of undocumented material were stored in every available space—mostly in the open on unimproved ground. It was clear that additional introduction of troops must be delayed in order to give logistic forces an opportunity to restore some measure of logistic control.[15]

In the early days of the buildup, the

predictable inertia of a new logistics system appears to have been ignored. The lack of an effective policy excluding nonessentials from the combat zone added significantly to the basic logistic problem. Frequently, many tons of overstowed nonessential cargo (e.g., overstuffed furniture, air conditioners, water ski equipment, stereo sets, et cetera) had to be offloaded just to reach the essential tools of war.

The exact tactical and strategic consequences of this disruption in the flow of arms and war material in Vietnam are difficult to determine, although the delay in deploying U.S. forces to their full effect had to be helpful to the Communists in restructuring their own efforts to meet this new challenge. After the 2 lean years (1965-1966), the inertia of the logistics system was overcome. Permanent base camps for each major combat unit were established, and these required added troops for administration and housekeeping. Each air-conditioned oasis had to be secured, and there was a natural tendency to remain close to the security of camp.

The affluent (for a combat zone) living conditions of the U.S. support base areas presented the Vietcong with perfect targets for their physical and propaganda attacks. The propaganda, originally directed at the French colonialists, was easily redirected at American rear area troops. Even though a physical probe by guerrillas into one of the U.S. support activities might not inflict significant material damage, an undisciplined response by logistics troops often created serious incidents in nearby Vietnamese villages. These incidents were invaluable to the Communist war of words and nerves. Rear support areas have always been the soft underbelly of armies and have often been exploited (e.g., Confederate cavalry raids in the Union rear areas during the U.S. Civil War). But the disproportionate size and prodigal living conditions of our base areas in Vietnam, plus the fluid guerrilla environment, gave the Communists special advantages in Vietnam.

In Qui Nhon, from October to December 1970, a series of U.S. responses to Communist guerrilla probes into the logistical complex resulted in serious property damage and loss of life in nearby villages. Anti-American demonstrations followed each incident. Subsequently, the combined United States/Vietnamese ammunition storage area in Qui Nhon was attacked and destroyed by guerrillas three times in the period of late 1970 and early 1971, with a total loss of approximately $20 million and additional Vietnamese lives.

Contrasts in living conditions between the support troops and combat troops have always caused morale problems for U.S. military forces, but in Korea and other past American conflicts the differences were not as noticeable as in Vietnam. In Korea most of the rear area troops continued to live in tents throughout the conflict and generally had a lower level of personal demand items and entertainment available than has been the case in Vietnam. While a truly objective measurement of the adverse effects on military efficiency created by glaring differences between rear area and frontline living conditions is not possible, most of the officers interviewed who served in Vietnam felt that the hostility created between the two areas impeded teamwork in direct support operations and degraded morale/performance in both areas.

Finally, one is compelled to note the counterproductive impact made by extensive permanent U.S. facilities and U.S. logistics base activities upon the general strategy of the war. North and South Vietnamese alike became convinced that the United States was absolutely committed to a protracted military engagement. The leverage initially possessed by Washington to influence direction of the South Vietnamese Government was seriously reduced by this

overt and concrete manifestation of long-term commitment. Convinced that the Americans were past the "point of no return," the Saigon regime was content to remain the pupil and leave the fighting to its new-found mentor. The conflict increasingly became an American war, and the U.S. objective of developing an independent nation with the will and ability to resist communism was being frustrated. Not until U.S. troop withdrawals convinced the South Vietnamese that the United States was not hopelessly entrapped did they truly begin to develop the capability to stand up to Hanoi's challenge.

Economic, Sociological, and Political Disruption of South Vietnam. In addition to the adverse military consequences, the enormous U.S. support operations substantially disrupted the economy, society, and political culture of South Vietnam. The disruption of nations by foreign armies in time of war is nothing new, and it must be recognized that the injection of U.S. military power into any developing country will create problems. If, however, as in Vietnam the objective is to develop an independent *will* and *ability* in the host nation to resist subversion, then the degree to which the host nation is disrupted internally by its allies would appear to be proportionately counterproductive to the attainment of the basic goal. Clearly, the massive U.S. presence in South Vietnam has brought with it this unfortunate byproduct, but even more tragically, excessive logistic support and the evils it supports have compounded an already difficult situation.

Although torn by war for nearly three decades, South Vietnam still had a relatively stable economic situation in 1964. The impact of inflation had been relatively minor with the price index rising from a base of 100 in 1958 to only 124 in 1964.[16] Exports of rice and rubber still brought over a billion piasters per year into the country.[17] The gross national product was $3 billion in 1964, and the average per capita income was $161.[18] However, since 1965 the Vietnamese economy has suffered a severe inflation that is still in progress as depicted in figure 2.

The purchasing power of the average American is at least 10 times that of the average Vietnamese at the legal rate of exchange, and this differential is further exaggerated by the black market barter of post exchange products. This severe economic disparity has been especially disruptive in the logistics base areas where Americans and their allies participate freely in the civilian economy.

Thousands of South Vietnamese have been directly employed by the U.S. forces, and thousands more were employed by firms that were sustained by American patronage.[19] This artificial economy appears to have raised the economic expectations of a large portion of the population above the level the Vietnamese economy alone can support after an American withdrawal. The relatively slow withdrawals of U.S. forces in 1970 and 1971 have already created serious unemployment problems, despite the fact that many of the snowball support bases remain relatively intact. As U.S. troop withdrawals continue, substantially reducing these base areas, the disintegration of the artificial economy will create additional economic pressures on the Saigon Government.

The basic sociological character of Vietnamese society is not usually apparent to the foreign visitor in Saigon inasmuch as the colonial facade of a progressive urban society appears to be representative of the country as a whole; thus many Americans have failed to grasp the fundamental gulf between the Vietnamese and themselves. As Ellen Hammer has analyzed them:

> The Vietnamese lead a Spartan existence in a difficult land. The character and behavior of both

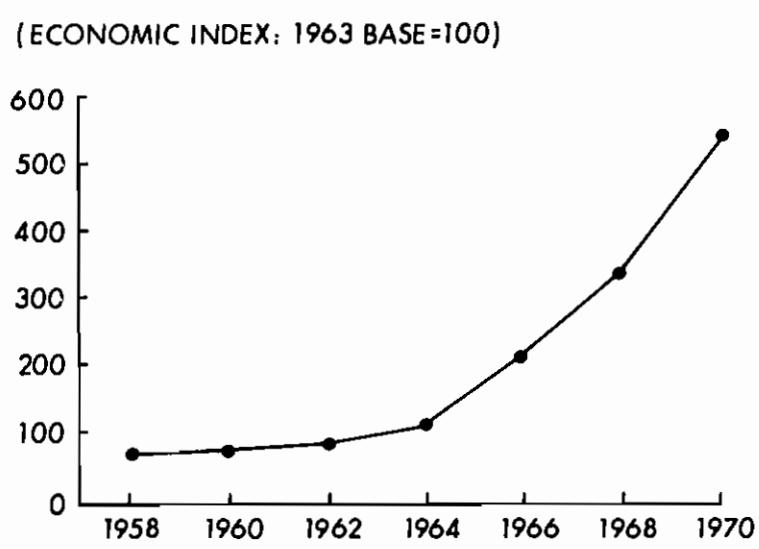


Fig. 2—Growth of Inflation in South Vietnam (1958-1970)

Source: "Economic Review of Indochina," *Quarterly Economic Review,* March 1971, p. 4, 29, 30.

> peasants and officials—the only two important classes in Vietnam during most of its history—were shaped by the harsh conditions of daily life. The agricultural nature of their civilization combined with the strong influence of confucianism to favor the growth of a collective society in which the interests of the individual were strictly subordinated to those of the group.[20]

Both the wealth and waste displayed by Americans are sources of "culture shock" to the people of a developing nation like Vietnam. American sociologists have written volumes about the shock that Americans suffer when injected into the poverty environment of the developing nation, but little has been said about the countershock that even individual Americans with their relatively greater economic power and aggressive character inflict on native hosts. The series of shocks inflicted upon the Vietnamese by a steady stream of Americans was substantial, though perhaps in some cases unintentional. Their economy was disrupted, their traditions ridiculed, their social standards challenged, and their women denigrated.

The search for security and American dollars brought thousands of rural Vietnamese into the cities of Vietnam after 1965. This dislocation of the population radically changed the social and economic pressures on these new city dwellers. Many of these transients were attracted by a "get rich quick" philosophy which focused on the American soldier and the huge U.S. support bases. Regardless of the motive that brought the peasant to the city, he was quickly swept up in the economic and social competition. The collective traditions of the joint family are difficult to maintain in the frantic urban environment, and many of the psychologically uprooted transplants become easy targets for Communist propaganda. With its war-torn, demoralized, and disrupted population, South Vietnam may well find both the political and economic costs prohibitive as the artificial American economy withers away. Individual Vietnamese cut off from the sense of security and fulfillment previously pro-

vided by the extended family may well develop into a force of discontented, unemployed, and politically volatile elements threatening the political stability of successive governments in Saigon.

Support of the huge logistics support operations required hiring of thousands of Vietnamese, leasing property and facilities from Vietnamese, and massive local procurement on the civilian economy. Most of these procurement funds, plus direct American aid, were by bureaucratic necessity channeled through the Vietnamese economic/political power elite that owns or controls most major commercial activities in the country. The South Vietnamese Government has been continuously embarrassed by disclosures of corruption throughout the country. This massive U.S. injection of wealth into the top of the Vietnamese society, due in part to the high level of U.S. support concepts, has, in effect, raised the stakes of corruption in Vietnam and contributed to its proliferation—thus further heightening popular dissatisfaction and political instability in the South.

Finally, close military and economic ties between the United States and the Vietnamese Central Government have led to increasing pressures for political centralization. This trend toward centralization has only served to aggravate the traditional hostilities of certain factions in the country which have resisted the gravitation of power to Saigon in the past. The Central Government initially promised extensive social reforms, but the artificial economic sufficiency produced by American aid and employment reduced the pressure for such reforms. As the American presence recedes, progress toward effective social reforms may well prove to be the key to survival of the current government as well as the political system.

Conclusions. Generally, the experience of U.S. Armed Forces in Vietnam suggests that too many resources were expended for too few results. Operational lessons about military logistics have been learned, especially through the efforts of the Joint Logistics Review Board in their analysis of logistics support in the Vietnam era. In their summary report they held:

> . . . that logistics support of U.S. combat forces in S.E. Asia during the Vietnam era was effective, but that the efficiency, and hence the economy, of that support could have been improved. Inadequate control of shipments, congestion at seaports and air terminals, unidentified materiel in storage yards, inaccuracy of inventory records, deterioration of supplies in open storage, and identified excesses all indicate that substantial improvements in efficiency and economy must be made in the conduct of logistics operations in a combat area.[21]

They went on to suggest that the major causes of logistical inefficiency during the Vietnam conflict were:

- The conduct of complex logistic operations overseas with the limited or nonexistent facilities inherent to an underdeveloped country.
- Inadequate numbers of trained logistic personnel and units.
- The failure to limit the introduction of supplies to the throughput capacity of the ports, depots, and bases.[22]

The conclusions of the board are a realistic appraisal of the operational factors that influenced logistics in Vietnam. The board further concludes that after the initial inertia of the logistics system was overcome,

> The military commander in Vietnam, the General Accounting Office, and Congress all have attested that, with relatively minor and temporary exceptions, U.S. forces committed to conflict have

> never been better supplied than those in S.E. Asia. In this context, it may be said that the logistician achieved his goal—satisfying the requirements of the soldier, sailor, marine, and airman facing the enemy at the end of the pipeline.[23]

The Joint Logistics Review Board observed that this performance was achieved with a significant degree of waste. However, the members of the board failed to address the more fundamental problem—i.e., command control over inflated logistics requests coming from the field. Although these problems are not new, they have not received sufficient attention outside the writings of S.L.A. Marshall who has provided the following analysis:

> I give it as my judgement that such tremendous waste came mainly from two faults in the system. The first is our overindulgent attitude toward our troops; we seem to feel that their loyalties cannot be commanded unless the Army acts as a pappy to them and puts their creature comforts above all else. The second was a basic weakness in the checks or controls over the supply demands of the field armies. It is impossible to say which of these evils—and they are still present in the logistical thought of every service—was in the long run the most unmilitary, the more encumbering and the more extravagant. Both come, however, from the illusion that American resources are practically inexhaustible. That idea of the national wealth, and how we should use it when war comes is by no means confined to the armed forces. But to the extent that they follow this public fancy, instead of determining a fundamental soundness for their own economy, they sanction the bogging down of true mobility under unsupportable weights.[24]

Not only did the overindulgent U.S. support concept diminish military efficiency in Vietnam, it also inflicted serious damage to the overall American strategic objective for the area—"to assist them (the countries of Southeast Asia) to develop will and ability to resist communism from within and without."[25]

The Joint Logistics Review Board, in recommending conceptual changes for future logistics support in combat zones incorporating the Vietnam experience, stated that:

> The fundamental cause of inefficiency is the shortage of logistics resources in the form of personnel and facilities. Although some adjustments in priority are practical, the hard fact is that logistic resources will always be severely taxed. If capability must be less than desired, then attention should be directed toward reducing the requirement for logistical support. Logisticians have always directed maximum effort toward meeting every requirement for responsive support to combat units. The result has sometimes been generation of logistic requirements without full realization of the impact on logistic resources in the combat area. *It is time now to find ways to maintain responsive support and at the same time "minimize the requirements for logistic resources in the area of conflict."*[26] [Emphasis added.]

This analysis led to their Finding Number 15: "Available techniques must be aggressively pursued to reduce the requirements for logistic resources in the combat area without a reduction of operational capability."[27]

The permanent nature of the support bases in Vietnam and the extended period of the conflict were conducive to

an inordinate expansion of the traditional logistics snowball. Yet the nature of this war made the presence of the overindulgent U.S. support a critical detraction from both tactical operations and strategic objectives.

It is probable that, despite the current public disaffection with the Vietnam involvement, American military forces will again be deployed in similar situations. As Edwin O. Reischauer projected in his book *Beyond Vietnam:*

> The net results of our withdrawal from the war in Vietnam, however skillfully we might try to conceal the withdrawal, would probably be an increase in instability in much of Asia and a decrease in the influence of the United States and in our ability to contribute to the healthy growth of Asia. These adverse consequences might be felt in much of Asia for years to come. The effects might not be limited to Asia. They might be felt in somewhat similar terms in other less developed parts of the world and might also affect our more important relations with the advanced nations.[28]

Given our experience in Vietnam, any application of U.S. military force into a similar environment in the future should be predicated on an absolute dedication to austerity. This country's current economic troubles, induced as they were in part by the manner in which we pursued the war in Vietnam, only confirm the fact that austerity in the conduct of military activities may be the only path which will allow successive American governments to use the military as a tool to implement foreign policy.

> In the age of total warfare, extravagance in a national concept of war, or in the operations of a national military system, will beget extravagance in the operations of a field division or a rifle squad. Whatever is manufactured beyond what is likely to be needed, whatever is put into the supply pipeline that might have been eliminated at no cost to the army's hitting power, inevitably decreases the volume of fire delivered against the enemy—lessens the chance of victory. Such waste of force is a depreciation of capital which, even should it not lead to defeat, must of necessity be carried as a debit into the peace that follows the war.[29]

The Nixon Doctrine, dictated as it is by the realities of both domestic and international politics and economies, appears to require an austere support concept for military success in the future.

Any future application of U.S. military force should be tailored to U.S. strategic objectives in the area of conflict. Special attention should be given to orienting the living standards of the military force to the local level, thereby minimizing the negative effects upon the host nation. If the basic objective is to develop the independent will and ability of the host nation to resist subversion, then every facet of the military operation should be tuned to that end.

To achieve minimum impact on the host nation in any future American military commitment, the land presence of support activities should be restricted and isolated from the native population. The current seabase concept, featuring minimum support forces ashore and dependence on selective unloading of ships (utilized as floating depots), seems to be a step in the right direction. Of course, this concept would restrict the size and activity of the combat force supported. The American presence in Cam Rahn Bay, isolated from Vietnamese population centers, probably had an insignificant effect on the Vietnamese society or economy, even though the same relative level of prodigal support was practiced there. This type of isolated base could be utilized to supplement the seabase concept, with intra-

theater break-bulk operations from deep draft to selectively loaded shallow draft shipping. In addition to supply functions, the bulk of the force maintenance should also be performed afloat or at an isolated base such as Cam Rahn Bay. Any practical concept that will reduce American presence in the host nation should be fully analyzed for future utilization.

The wisdom of fighting a war of national liberation with a large draftee army on short rotation will be a subject of discussion by historians for many years. But in Vietnam many combat and logistics support units, basically composed of short rotation draftees, displayed outstanding efficiency and esprit de corps in every phase of their mission. These units were usually separated from the air-conditioned, post exchange oriented environment of the logistics base areas. A realistic analysis should be made to determine essential morale items (e.g., shaving gear, beverages, and snacks), and then effective command controls should be applied to bar the remainder from the combat zone. Instead of trying to buy morale with a shotgun pattern of cosmetic gimmicks, the American military should return to the leadership fundamentals that made its morale and performance a much sought after pattern by other armed forces around the globe. A military commander who has a realistic knowledge of his profession and his men and takes care of his men will probably accomplish his mission and have high morale in his organization. Taking care of one's men does not mean overindulging them with material consumption; in fact, it usually means the exact opposite—i.e., preparing them with tough training and material sacrifice to accomplish any required mission under the rigors of combat. Lasting morale is much more influenced by leadership and performance than by post exchanges, club facilities, swimming pools, air conditioning, mod hair styles, or R & R in Hong Kong. This weapon morale, as earlier defined by Eccles, is based on:

> . . . rigorous discipline, hard training, confidence in one's leaders, one's weapons, one's ability to use them, and above all by pride in one's ability to accept great risk and hardship . . . [it] is unpopular and difficult to attain, but it stands the test of fire . . . while all concepts are affected, combat effectiveness and the logistics snowball are most sensitive to the evil effects of mediocre morale and leadership.[30]

Continuing emphasis should be placed on the development of a philosophy of austere supply discipline and the establishment of effective controls to enforce that philosophy throughout the U.S. Armed Forces. Of course the tendency exists to pass this responsibility

BIOGRAPHIC SUMMARY

Lt. Col. Harold D. Gallagher, U.S. Army, did his undergraduate work at South Dakota State University and earned a master's degree in industrial management from Stanford University. His primary service training and experience has been in transportation and engineering. More recently he served as Operations Officer with the 125th Transportation Battalion in Germany, as Port Operations Officer with the 5th Transportation Terminal Command, and as Logistics Task Force Commander with the 1st Logistical Command in Vietnam (1966-67) and again in Vietnam as Senior Adviser to the Vietnamese 2d Logistics Command and as a logistics staff officer at the Headquarters Military Assistance Command, Vietnam (1970-71). Lieutenant Colonel Gallagher is a recent graduate of the College of Naval Command and Staff and is currently serving as Deputy Professor of Military Science (ROTC) at South Dakota State University.

to the civilian chiefs in the Department of Defense, but as Marshall so aptly stated:

> We cannot pass the whole buck into the civilian lap so long as most professional soldiers who shape our military policy are content to rock with the grain. The services are not improved by the tendency to accept with little question outside counsel on all prime matters of service efficiency. There is no substitute for generalship in its real sense . . . The lack of a fundamental supply discipline in all ranks of all the services causes more friction and destroys more mobility in the operations of American forces than any other weakness. And it is a chief contributor to our moral weakness.[31]

The capacity for the military to be the dominant influence on supply discipline in the combat zone was demonstrated by the marked difference in supply discipline between various units and services in Vietnam (e.g., U.S. Marine units often operated with a fraction of the logistics support required for U.S. Army units with similar missions). That ability to provide relatively equal combat effectiveness with less resource expenditure within the same civilian guidance was directly dependent upon the support philosophy of the military commander. Such an austere approach to supply discipline must start at the top of the military organization to achieve widespread acceptance and effectiveness.

Any future projection of U.S. military power into a limited war environment will require sensitivity to the full spectrum of generated effects relevant to U.S. strategic objectives. The strategic effect of successful combat operations may again be counteracted by the adverse effects of logistic operations in the host nation. Successful future involvement of U.S. military forces in a limited, political conflict in a developing nation is doubtful under a Vietnam level support concept, but if any future effort is effectively restricted to the military essentials of firepower and mobility, such a "lean American camel" might transit the "needle's eye" without seriously disrupting the host nation or the U.S. global defense posture.

FOOTNOTES

1. *The Bible*, Matt., 12:24.
2. Mao Tse-tung, *Quotations from Chairman Mao Tse-tung* (Peking: Foreign Language Press, 1966), p. 60-90.
3. Henry E. Eccles, *Military Concepts and Philosophy* (New Brunswick, N.J.: Rutgers University Press, 1965), p. 83.
4. S.L.A. Marshall, *The Soldier's Load and the Mobility of a Nation* (Quantico, Va.: Marine Corps Association, 1965), p. 91.
5. U.S. Joint Logistics Review Board, *Logistics Support in the Vietnam Era: Summary Assessment* (Washington: 1970), v. I, p. 3-4.
6. "Congressional Study: Vietnam War Cost $120 Billion," *Congressional Quarterly Weekly Report*, 16 July 1971, p. 1533.
7. James A. Huston, *The Sinews of War—Army Logistics 1775-1953* (Washington: Office of Military History, U.S. Army, 1966), p. 650.
8. Amrom H. Katz, "An Approach to Future Wars of National Liberation," *Southeast Asian Perspectives*, December 1971, p. 19.
9. U.S. Joint Logistics Review Board, *Logistics Support in the Vietnam Era: Ammunition*, Monograph 2 (Washington: 1970), v. 1, p. 31.
10. *Ibid.*, p. 136.
11. *Ibid.*
12. Joint Logistics Review Board, *Summary Assessment*, v. I, p. 3-4.
13. "Senators Charge 3-Way PX Guilt," *The New York Times*, 3 November 1971, p. 1:3.

14. Eccles, p. 247.
15. Joint Logistics Review Board, *Summary Assessment*, v. I, p. 10.
16. "Vietnam," *The American Annual—1966* (New York: Americana, 1966), p. 728.
17. "Asian Economic Statistics," *Economic Bulletin for Asia and Far East* (New York: United Nations, September 1967), p. 98.
18. "Vietnam," p. 714, 728.
19. U.S. Joint Logistics Review Board, *Logistics Support in the Vietnam Era: Military Personnel in Operational Logistics*, Monograph 14 (Washington: 1970), p. 43-48.
20. Ellen Hammer, *Vietnam, Yesterday and Today* (New York: Holt, Rinehart and Winston, 1966), p. 23.
21. Joint Logistics Review Board, *Summary Assessment*, v. I, p. 22.
22. *Ibid.*
23. *Ibid.*, p. 4.
24. Marshall, p. 80-81.
25. *The Pentagon Papers, The New York Times* ed. (New York: Bantam, 1971), p. 27.
26. Joint Logistics Review Board, *Summary Assessment*, v. I, p. 22.
27. *Ibid.*, p. 23.
28. Edwin O. Reischauer, *Beyond Vietnam* (New York: Knopf, 1968), p. 13.
29. Marshall, p. 113.
30. Eccles, p. 247.
31. Marshall, p. 92.

ψ

Strategy and tactics and logistics are different aspects of the same thing. If completely separated they become meaningless.

James A. Huston: A History of U.S. Army Logistics 1775-1953

YAMASHITA, NUREMBERG AND VIETNAM:

COMMAND RESPONSIBILITY REAPPRAISED

Domestic political conflict in the United States over the propriety of the conduct of U.S. forces in combat in Vietnam has centered most recently about Professor Telford Taylor's thesis which holds American commanders as senior as General Westmoreland directly responsible for battlefield tragedies such as My Lai. Despite the widespread confusion generated by these contentions, international legal precedents established at Nuremberg do not confirm Professor Taylor's judgment. In fact, both the Nuremberg trials and the Yamashita case itself, when reexamined in the light of new evidence, set forth the relatively unambiguous standard of command responsiblity for war crimes which requires evidence proving a commander's personal negligence or participation in criminal behavior before he may be properly convicted.

A research paper

prepared by

Lieutenant Colonel Franklin A. Hart, U.S. Army

> . . . if you were to apply to them [General Westmoreland and other U.S. generals] the same standards that were applied to General Yamashita, there would be a very strong possibility that they would come to the same end as he did.[1]

The preceding assertion by Professor Telford Taylor, the U.S. prosecutor at Nuremberg after World War II, is a benchmark in the current discussion of war crimes and Vietnam. For the first time, a reputable scholar of moderate persuasion suggested the possibility that American military leaders be tried for their responsibilities in the conduct of the Indochina war. Taylor's book *Nuremberg and Vietnam* became an instant success, and his analogy concerning Yamashita is regularly cited in the debate over the U.S. conduct of the war. Variations of Taylor's Yamashita analogy, often including the word "Nuremberg," are freely bandied about in the more important organs of the American press. This publicity has contributed to widespread belief that a general principle of international law concerning command responsibility was established in the Yamashita case and that application of the so-called Yamashita principle to the Vietnam war would work to the detriment of U.S. leaders.

The popular view of the Yamashita case is well expressed in the following passage from Taylor's book:

> There was no charge that General Yamashita had approved, much less ordered these barbarities and no evidence that he knew of them other than the inference that he must have because of their

extent . . .. Nevertheless, the tribunal found Yamashita guilty on the ground that he had "... failed to provide effective control of his troops as required by the circumstances" and sentenced him to death by hanging.[2]

Unquestioningly accepting this perception of the Yamashita case, many writers and commentators on the Vietnam war would then agree with Taylor's conclusion quoted in the beginning of this article that U.S. military leaders would meet Yamashita's fate if subjected to the standards of his trial.

Most members of the press and the academic community have adopted Taylor's thesis at face value without examining it closely. None apparently have wondered why Nuremberg prosecutor Taylor, responsible for the trial and imprisonment of a large number of senior German military leaders, chose to select as his standard and precedent the result of an American Military Commission in the Far East that was not conducted under international auspices.

The issues arising over "command responsibility" as an international law of war concept can be stated precisely. The popular perception of the Yamashita principle is that it established a rule that a military commander was responsible for the breaches of law committed by members of his command whether or not he personally knew about them. Yet, 2 and then 3 years after the Yamashita case, international military tribunals operating in a judicially restrained atmosphere at Nuremberg articulated a restricted standard of command responsibility which required that a military commander had to be personally derelict to be found guilty.[3] Why has Nuremberg been ignored in the headlines linking My Lai and Yamashita? Can Nuremberg and Yamashita be reconciled?

This paper seeks to examine the concept of command responsibility formulated under the international law of war. Command responsibility concerns the responsibility of a military commander for the actions of his subordinates. Inherent in this discussion is the development of this concept in the Yamashita and Nuremberg trials and then application of the internationally recognized standard to U.S. conduct in Vietnam.

A final preliminary point is that in his recent book Professor Telford Taylor subsumed under the rubric of "Yamashita Case" an argument he had put forward at the Nuremberg tribunals more than two decades ago. His argument of absolute command responsibility was categorically and expressly rejected in the Nuremberg "High Command Case."[4] The Nuremberg section of this study will document that result. Recognition of Taylor's attempt to resurrect a previously rejected argument is important because it indicates the confusion and misunderstandings extant in the field of command responsibility.

At a time when men's lives and reputations are at stake, it is distressing to read as great a denial of legal craftsmanship and law as has been evidenced in Professor Taylor's comment in the introduction to *Nuremberg and Vietnam:*

> For these purposes, the term "Nuremberg Trials" should not be taken as limited to the precise rulings of the Nuremberg courts, but in its broad sense, as standing for all the war crimes trials that followed in the wake of the Second World War, and the ideas they have generated. Today "Nuremberg" is both what actually happened there and what people think happened, and the second is more important than the first. To set the record straight, is, no doubt a useful historical exercise, but sea change is itself a reality, and it is not the bare record but the ethos of Nurem-

berg with which we must reckon today.

Put another way, Nuremberg is not only what was said and done there, but also what was said about it, then and subsequently . . .[5]

As a constitutional lawyer, Professor Taylor knows that such attacks as his must be clearly written. Surely it is a very questionable practice to establish public emotion, rather than precisely reasoned judgments, as formulating the rules of human behavior.

Yamashita Case. On 7 December 1945, an American Military Commission of five general officers, sitting in Manila, Philippine Islands, found Gen. Tomayuki Yamashita, Commanding General of the Japanese 14th Army Group in the Philippines, guilty of failing to discharge his duty by permitting the members of his command to commit atrocities against Americans and Filipinos in the Philippine Islands during the period 9 October 1944 to 2 September 1945 and sentenced him to hang. After ultimate recourse to the Supreme Court of the United States, Yamashita was hanged on 23 February 1946.[6]

The evidence presented to the Military Commission indicated that a significant number of atrocities were committed by members of the Japanese military within a short time interval and under similar circumstances during the dates specified. The 123 specific charges alleged a total of tens of thousands of deaths.[7] General Yamashita contended that most of the atrocities were committed by units or commanders distant from his headquarters, either geographically or in the chain of command, and that he had no knowledge of the atrocities. In its judgment, the Commission accepted certain of the geographical and communications difficulties alleged by the Japanese general but concluded that these problems were not quite as insurmountable as Yamashita contended.[8]

The prosecution built its case upon proving to the Commission that the atrocities had indeed been committed and identifying the perpetrators as individuals or units ultimately subordinate to General Yamashita.[9] The core of the prosecution's contention is contained in the following assertion by the chief prosecutor:

> The record itself strongly supports the contention or conclusion that Yamashita not only permitted but ordered the commission of these atrocities. However, our case does not depend upon any direct orders from the accused. It is sufficient that we show that the accused "permitted" these atrocities . . .. Who permitted them? Obviously the man whose duty it was to prevent such an orgy of planned and obviously deliberate murder, rape and arson—the commander of those troops![10]

Perhaps concerned that the Military Commission would not accept this theory and would require proof of Yamashita's personal involvement, the prosecutor went beyond his stated plan and introduced evidence directly linking Yamashita to the atrocities.[11]

The judgment of the Military Commission appeared to support the prosecutor's contention. The frequently cited part of the judgment which established for legal onlookers the principles under which Yamashita was found guilty reads as follows:

> Clearly, assignment to command military troops is accompanied by broad authority and heavy responsibility. This has been true in all armies throughout recorded history. It is absurd, however, to consider a commander a murderer or rapist because one of his soldiers commits a murder or a rape. Nonetheless, if murder and rape and vicious, revengeful actions are widespread offenses and there is no effective attempt

> by a commander to discover and control the criminal acts, such a commander may be held responsible, even criminally liable, for the lawless acts of his troops, depending upon their nature and the circumstances surrounding them . . . .[12]

With this statement of principles, the Military Commission then went on to declare to General Yamashita, " . . . that during the period in question you failed to provide effective control of your troops as required by the circumstances."

Since this key part of the judgment did not address the question of actual knowledge on General Yamashita's part and because the evidence linking Yamashita to the atrocities has been portrayed as weak, most legal scholars concluded that Yamashita's guilt was based upon his commanding a unit engaged in such widespread atrocities that he should be held responsible for them. It is not clear, however, whether ascription arises from imputation of a constructive knowledge or from a legal concept of absolute responsibility.

In reviewing the Military Commission's judgment, we find that the U.S. generals were impressed by the scope of the atrocities and hence believed that General Yamashita should have known about them or did know and lied about his knowledge. The difference between the two propositions is significant because upon it hinges the question as to whether or not personal guilt must be proved. Unfortunately, the Commission's judgment failed to discuss explicitly whether it accepted or rejected Yamashita's contention of ignorance.

Because of their perception of an absence of credible evidence linking the Japanese general to the proven atrocities, international legal scholars and others have usually asserted that the Commission accepted Yamashita's statement of ignorance. Yet it is equally as credible to assert that the Commission believed Yamashita lied as to believe that it accepted his word.

If we reexamine the judgment we can find sections in which the Military Commission exhibited disbelief at what Yamashita told them and seemed convinced that he ordered or knowlingly permitted the atrocities. Consider this part of the judgment:

> The prosecution presented evidence to show that the crimes were so extensive and widespread, both as to time and area, that they must either have been wilfully permitted by the accused, or secretly ordered by the accused. Captured orders issued by subordinate officers of the accused were presented as proof that they, at least, ordered certain acts leading directly to exterminations of civilians under the guise of eliminating guerrillas hostile to Japan.[13]

The Commission's comments concerning Yamashita's method of operation displayed considerable incredulity.

> The Japanese Commanders testified that they did not make personal inspections or independent checks during the Philippine campaign to determine for themselves the established procedures by which their subordinates accomplished their missions. Taken at full face value, the testimony indicates that Japanese senior commanders operate in a vacuum, almost in another world with respect to their troops, compared with standards American generals take for granted.[14]

The quoted sections of the judgment resulted from the extensive evidence introduced by the prosecution which purported to show that Yamashita knew of the atrocities, ordered some of them, and was headquarterd so close to several of the scenes of infamy that he could not have failed to notice them. Nothing in the questioning by the Military

Commission or in its judgment provides a basis to believe that the generals did not accept this evidence. The evidence linking Yamashita to the atrocities, although often hearsay, was quite specific.[15] When one combines the quantity of such evidence with the judgment, it becomes difficult to believe that the Military Commission accepted Yamashita's protestations of ignorance.

The contention that the Military Commission rejected Yamashita's plea of ignorance is strengthened by paragraphs below which describe how a Board of Review of Army officers in the Pacific informed Gen. Douglas MacArthur that Yamashita's testimony could not be believed.

The review conducted by General MacArthur is an important and previously unpublished part of the Yamashita proceedings. MacArthur's confirmation of the sentence of hanging followed his receipt of a written review which asserted that Yamashita had lied. The Board of Review of five military lawyers, headed by Col. C.M. Ollivetti, the Theater Judge Advocate, prepared a detailed analysis of the record of trial for MacArthur.[16]

First, the review presented evidence of a deliberate Japanese plan of extermination:

> The following evidence indicates a deliberate plan of extermination: most of the atrocities were committed during a short period in February, 1945 . . . and were carried on under the supervision of Japanese officers . . . following the same procedure of concentrating the population of a town or barrio at a convenient place and killing them in an orderly manner . . .. the large scale upon which attempts were made to exterminate the male population of some places . . . and the wanton killing of women and children . . . indicates an intention to wipe out the people of the province. The deliberate destruction of whole towns and barrios was also a part of this plan . . .[17]

In short, the Board of Review perceived a conspiracy to commit genocide directed or abetted by Yamashita.

Second, the Board took special note of evidence which connected General Yamashita with actual knowledge of the atrocities perpetrated. Telford Taylor, who wrote that there was "no evidence that he [Yamashita] knew of them [the atrocities] other than the inference that he must have because of their extent"[18] should be surprised at the amount of evidence presented to the Commission which indicated knowledge.[19] Admittedly, the evidence linking Yamashita to the crimes included a number of instances of hearsay evidence and conjecture. What is important is that the Board of Review apparently believed it and described it to General MacArthur without cautioning him as to its legal validity.[20]

Third, the Board of Review reaffirmed the validity of the concept of command responsibility without addressing the subject of explicit knowledge raised by the defense.

> But since the duty rests on a commander to protect by any means in his power both the civil population and the prisoners of war from wrongful acts of his command and since the failure to discharge that duty is a violation of the Laws of War, there is no reason, either in law or morality, why he should not be held criminally responsible for permitting such violations by his subordinates, even though that action has heretofore seldom or never been taken. The responsibility of the commander to control his troops is well understood by all experienced military men, including accused . . .[21]

Specific aspects of this command

responsibility doctrine were discussed in the review when it faulted the accused:

> Although the attitude of the Filipino civilians was one of increasing hostility, he did not, though in violation of duty investigate their conditions at any time nor did he ever inspect prisoner of war or civilian internment camps, even though one was located at his headquarters . . . At no time did he order, receive any report or acquire any knowledge whatever of any mistreatment or killing of civilians, American prisoners of war or civilian internees by the military police or any of his subordinates.[22]

Fourth, the disbelief in Yamashita's contention that he knew nothing of the atrocities, the Review Board's belief in the extermination plan thesis, and the credence given the evidence linking Yamashita to the crimes are brought together in the summary section of the review:

> The only real question in the case concerns accused's responsibility for the atrocities shown to have been committed by members of his command. Upon this issue a careful reading of all the evidence impels the conclusion that it demonstrates this responsibility. In the first place the atrocities were so numerous, involved so many people, and were so widespread that accused's professed ignorance is incredible. Then, too, their manner of commission reveals a striking similarity of pattern throughout . . . in several instances there was direct proof of statements by the Japanese participants that they were acting pursuant to orders of higher authorities, in a few cases Yamashita himself being mentioned as the source of the order . . .. All this leads to the inevitable conclusion that the atrocities were not the sporadic acts of soldiers out of control but were carried out pursuant to a deliberate plan of mass extermination which must have emanated from higher authority or at least had its approval . . .. From the widespread character of the atrocities as above outlined, the orderliness of their execution and the proof that they were done pursuant to orders, the conclusion is inevitable that the accused knew about them and either gave his tacit approval to them or at least failed to do anything either to prevent them or to punish their perpetrators.
>
> There was some evidence in the record tending to connect accused even more directly with the commission of some of the atrocities . . .. While, however, it may be conceded that the accused was operating under some difficulty due to the rapidity of the advance of the Americans, there was substantial evidence in the record that the situation was not so bad as stated by the accused . . ..[23]

After the findings and sentence were confirmed by General MacArthur, the defense appealed to the Supreme Court of the United States. Without examining the substantive evidence introduced in the trial at Manila, the Supreme Court ruled that the offense of which General Yamashita was charged constituted a violation of the laws of war:

> The question then is whether the law of war imposes on an army commander a duty to take such appropriate measures as are within his power to control the troops under his command for the prevention of the specified acts which are violations of the law of war and which are likely to attend the occupation of hostile territory by an uncontrolled soldiery, and whether he may be charged with personal responsibility for his

failure to take such measures when violations result. That this was the precise issue to be tried was made clear by the statement of the prosecution at the opening of the trial.

It is evident that the conduct of military operations by troops whose excesses are unrestrained by the orders or efforts of their commander would almost certainly result in violations which it is the purpose of the law of war to prevent . . ..

These provisions plainly imposed on petitioner . . . an affirmative duty to take such measures as were within his power and appropriate in the circumstances to protect prisoners of war and the civilian population.[24]

In order to reinforce the point that the Court was not examining the evidence with respect to the critical question of responsibility described above, the Court first said, "We do not here appraise the evidence on which petitioner was convicted," and then in a footnote to the same paragraph reiterated, "We do not weigh the evidence. We merely held that the charge sufficiently states a violation against the law of war . . .."[25]

Those who read the Supreme Court's decision and were disappointed with its ambiguous nature and its failure to discuss certain questions raised by the defense should not be surprised to find the ambiguity deliberate. In a letter to the legal historian John P. Frank less than 1 month after the decision, Associate Supreme Court Justice Wiley Rutledge related that the argument over the Yamashita case and its constitutional implications was bitter and deep. Chief Justice Harlan Fiske Stone deliberately omitted whole sections of constitutional argument from the majority opinion because of an inability of the majority to agree on its rationale.[26]

The bitter dissents of Justices Rutledge and Frank Murphy raised severe questions about the fairness of the trial as well as the judicial principles asserted. Murphy and Rutledge questioned the rules of evidence which varied considerably from those used at the time in U.S. courts-martials, the haste of the trial, denial of fifth amendment rights to the accused, and the appropriateness of the charge.[27] In describing the process Murphy charged that:

The trial proceeded with great dispatch without allowing the defense time to prepare an adequate case. Petitioner's rights under due process clause of the Fifth Amendment were grossly and openly violated without any justification. All of this was done without any thorough investigation and prosecution of those immediately responsible for the atrocities, out of which might have come some proof or indication of personal culpability on petitioner's part.[28]

Associate Justice Rutledge attacked the fairness of the trial with equal fervor:

One basic protection of our system and one only, petitioner has had. He has been represented by able counsel, officers of the army he fought . . .. But, as will appear, even this conceded shield was taken away in much of its value, by denial of reasonable opportunity for them to perform their functions.[29]

In referring to the last minute addition of a Supplemental Bill of Particulars alleging 59 additional offenses and the denial of additional time for the defense to prepare their case, Rutledge caustically added: "... this wide departure from the most elementary principles of fairness vitiated the proceedings. When added to the other denials of fundamental right sketched above, it deprived the proceedings of any semblance of trial as we know that institution."[30]

To those who would charge unfairness on the basis of the comments above, we would respond that the Supreme Court in its review of the case sustained the proceedings. Although the majority ruled neither on the substance of the evidence nor the question of fairness per se, they held that the offense charged was a violation of the laws of war and that the safeguards of the fifth amendment and the requirements of the Articles of War were not applicable to a prisoner of war charged with war crimes committed prior to his capture.[31] Put squarely, unfairness was upheld.

At this point we should question why legal scholars have asserted that there was "no evidence that he [Yamashita] knew of" the atrocities.[32] The answer appears straightforward. The Military Commission failed to address the question of knowledge explicitly, and the report of the Board of Review was not published. No observer knew what the generals and the various reviewing authorities really believed. This vacuum of understanding was quickly preempted by a very aggressive defense team and one of its members in particular, A. Frank Reel. In the trial at Manila, the hearing before the U.S. Supreme Court in Washington, and the campaign waged in the press both before and after Yamashita's execution, Reel and his comrades leaned heavily on a line of defense which asserted a lack of credible evidence linking Yamashita to the atrocities. These assertions were repeated so often that they became accepted as facts. Associate Justices Murphy and Rutledge incorporated Reel's contentions concerning lack of credible evidence in their sharp dissents and commented on the Government's failure to refute them.[33]

After the trial Reel wrote an interesting account of the Yamashita proceedings which received widespread publicity and is often used as a repository of facts about the trial.[34] In his account Reel proved to his own satisfaction that any evidence which linked Yamashita to the crimes should not have been admitted or was discredited when introduced. Subsequent discussions of the trial have for the most part accepted Reel's views as stated by him and by the two dissenting Supreme Court Justices.[35]

Rutledge's and Murphy's views concerning the fairness of the trial, their views on the lack of evidence linking Yamashita to the crimes, and Reel's unchallenged declarations have colored the popular view of the Yamashita trial. It would be well for us to remember that substantial evidence was introduced which directly linked Yamashita to the crimes. In one instance his own Judge Advocate testified that he had received personal permission from Yamashita to allow the Japanese military police to punish captured Filipino guerrillas without trial.[36] The charge that such evidence could not have been admissible in a U.S. court is irrelevant to our understanding of the meaning of the Yamashita verdict. More importantly, the Supreme Court declined to review the evidentiary rules, and the Military Commission heard evidence under these rules which tended to show General Yamashita knew of the crimes. Hence, the conviction, reflected an example of command responsibility in which a commander was convicted for crimes committed by his forces about which he knew and failed to take action or may even have directed.

What then should we make of the Yamashita case? Telford Taylor's thesis that war crimes trials are what people think happened proves most valid in this trial. Evidence exists to support the belief that both the members of the Military Commission and the Reviewing Authority (General MacArthur) believed that Yamashita knew of the atrocities committed by his forces and either ordered them or, at minimum, knowingly permitted them. Hence the ver-

dict was consistent with the accepted principle of the international law of war that a commander is responsible for those actions which he directed or sanctioned. However, a combination of circumstances established in the Yamashita case a perception of a principle of absolute responsibility. The factors leading to this misperception were: lack of information as to whether or not the Military Commission believed Yamashita; lack of information concerning the basis upon which General MacArthur sustained the conviction and sentence; the ambiguity of certain portions of the Military Commission's judgment; the hearsay nature of the evidence which linked Yamashita to the atrocities; and the manner in which the defense counsel and the dissenting Supreme Court Justices couched the central issue. The defense counsel, the Supreme Court Justices, and legal scholars appeared to believe that the Military Commission accepted Yamashita's protestations of ignorance at face value and convicted him in spite of them. Justice Frank Murphy's description of the action taken against Yamashita, unchallenged in the majority opinion, reflects the view held subsequently by most students of international law:

> He [Yamashita] was not charged with personally participating in acts of atrocity or with ordering or condoning their commission. Not even knowledge of these crimes was attributed to him. It was simply alleged that he unlawfully disregarded and failed to discharge his duty as commander to control the operations of members of his command, permitting them to commit the acts of atrocity.[37]

Legal scholars have subsequently accepted the so-called Yamashita principle as Justice Murphy stated it without reconciling it to later trials at Nuremberg or elsewhere.

It should be apparent from the evidence presented that the public perception of a Yamashita principle of absolute command responsibility should be rejected and its use discredited. Contrary to popular belief, substantial evidence was introduced in the trial linking Yamashita to the crimes for which he was charged. Although the evidence might be inadmissible by today's standards, the Supreme Court declined to review the evidentiary rules and thus allowed them to stand. More importantly, the Military Commission accepted the evidence as presented; the judgment gives no reason to believe otherwise. Further, the Board of Review left little doubt that it believed General Yamashita knew of the offenses and hence was guilty under established international law. Thus, the generals who sat in judgment convicted a military commander whose troops committed war crimes and who learned about the atrocities and took no punitive or preventive action. This result clearly conflicts with the various reports of the Yamashita case which usually assert that no credible evidence was found to link the Japanese general with the offenses and then announce a principle based upon that assertion.

The next section of this paper will examine the Nuremberg Subsequent Proceedings which provide a precise and reasonable articulation of command responsibility rendered in an acceptable judicial environment.

The Nuremberg Subsequent Proceedings. The principle of limited command responsibility articulated at Nuremberg is consistent with the command responsibility doctrine cited in the Yamashita case. It is no accident that Telford Taylor selected the word "Nuremberg" for use in the title of a book concerning principles derived from all war crimes trials following the Second World War. To the American public Nuremberg is both synonymous with war crimes trials

and perceived as the accepted standard of such trials. Additionally, the conduct of the trials at Nuremberg evoked less criticism of their fairness and received far more praise for their judicial restraint than did certain of the U.S. Military Commissions in the Far East or the International Military Tribunal for the Far East.[38]

Two types of trials were conducted at Nuremberg. During 1945-1946 the International Military Tribunal at Nuremberg tried the major war criminals including Goering, Hess, Keitel, Speer, and others. Upon completion of this tribunal, the United States, under international auspices, conducted the Nuremberg Subsequent Proceedings; these consisted of 12 trials against major groups of German leaders, including government ministers, justices, diplomats, and others. Two cases against military leaders have relevance for the study of "Command Responsibility": Case No. 7, *U.S.* v. *List et. al.*, "The Hostages case"; and Case No. 12, *U.S.* v. *von Leeb et. al.*, "The High Command case."

"The High Command case" concerned the trial of 14 German Army, Navy, and Air Force leaders for plotting aggressive war and implementing illegal orders such as the "Commissar Order," the "Barbarossa Order," the "Commando Order," and the "Night and Fog Decree." Most of the alleged offenses occurred on the Russian front.[39]

The most prominent defendant in "The High Command case" was Field Marshal Wilhelm von Leeb, who commanded, among other units, Army Group North on the Russian front from June 1941 to January 1942. Von Leeb was charged with war crimes and crimes against humanity through the commission of crimes against enemy belligerents and prisoners of war. Specifically, the Chief Counsel of War Crimes, Brig. Gen. Telford Taylor, charged that Von Leeb: implemented the "Commissar Order" calling for the immediate execution of Soviet political officers captured by German forces; implemented the "Barbarossa" jurisdictional order which called for the execution of captured Russian partisans; and condoned crimes against civilians through the activities of the Einsatzgruppes which operated in the Army Group rear area and were responsible for the execution of thousands of civilians.[40]

Von Leeb put forward a vigorous defense. First, he asserted that he had opposed illegal orders such as the "Commissar Order" and had not disseminated them. Second, he maintained that he had received no reports of executions of Russian soldiers or civilians and that he was unaware of the operations of the Einsatzgruppes, although credible evidence proved that their activities were widespread and notorious.[41]

In effect, Von Leeb presented a defense that had many elements in common with that of General Yamashita. How was it received? The prosecution's closing arguments in the Von Leeb case were reminiscent of the prosecution arguments at Manila in the fall of 1945. In respect to Von Leeb himself, the prosecution, under Taylor's direction, charged:

> The prosecution suggests that these so-called "defenses" are miserable fabrications, and that the record proves incontrovertibly that the Commissar Order was distributed and carried out within von Leeb's Army Group, with von Leeb's knowledge and resulted in the outright murder of numerous prisoners of war . . .. Whether von Leeb himself passed the order to the Fiftieth Corps, or whether, knowing that the Sixteenth Army would pass the orders to them, he took no action to prevent this, seems to the prosecution a totally academic question . . .. von Leeb's testimony that he did not learn of the reports concerning the shoot-

ings of commissars pursuant to the order is totally incredible.[42]

In its judgment the tribunal examined closely the evidence directly linking Von Leeb with crimes against enemy belligerents or prisoners of war and found him not guilty of executing Red army soldiers within his area, not guilty of the murder or slave labor recruitment of civilians in his area, not guilty of the pillage of public and private property, and not guilty of criminal conduct in the siege of Leningrad. What is signficant about this finding is that Von Leeb was found not guilty of the first two charges even though credible evidence was presented that such criminal activities occurred within his Army Group area. The court found Von Leeb guilty of implementing the "Barbarossa" jurisdiction order which specified execution for certain types of Russian guerrillas captured. He was sentenced to 3 years in prison, given credit for pretrial confinement, and released at the end of the trial.[43]

In its judgment rendered on Von Leeb and his codefendants, the court dealt rather specifically with the subject of command responsibility:

> Modern war such as the last war entails a large measure of decentralization. A high commander cannot keep completely informed of the details of military operations of subordinates and most assuredly not of every administrative measure. He has the right to assume that details entrusted to responsible subordinates will be legally executed. The President of the United States is Commander in Chief of its military forces. Criminal acts committed by those forces cannot in themselves be charged to him on the theory of subordination. The same is true of other high commanders in the chain of command. Criminality does not attach to every individual in this chain of command from that fact alone. There must be a personal dereliction. That can occur only where the act is directly traceable to him or where his failure to properly supervise his subordinates constitutes criminal negligence on his part. In the latter case it must be a personal neglect amounting to a wanton, immoral disregard of the action of his subordinates amounting to acquiescence.[44]

Later the tribunal stated explicitly that, "... the commander must have knowledge of these offenses and acquisesce or participate or criminally neglect to interfere in their commission and that the offenses must be patently criminal."[45]

In dealing with its judgment on Von Leeb, the tribunal categorically rejected the prosecution's arguments and said:

> The evidence suggests that criminal orders were executed by units subordinate to the defendant and criminal acts were carried out by agencies under his command. But it is not considered under the situation outlined that criminal responsibility attaches to him merely on the theory of subordination and overall command. He must be shown both to have had knowledge and to have been connected with such criminal acts either by way of participation or criminal acquiescence.[46]

Additionally, the court further stated in another part of the Von Leeb judgment:

> While he [von Leeb] had the right to issue orders to his subordinates concerning such matters, he also had the right to assume that the officers in command of those units would properly perform the function which had been entrusted to them by higher authorities, both as to the proper care of prisoners of war or the uses to which they might be put.[47]

The cases of Von Leeb's codefendants are not of concern here since those who were found guilty of crimes against enemy belligerents or prisoners of war faced overwhelming evidence which linked them to both knowledge and direction of such crimes. No real doubt exists that a commander who directs illegal acts against civilians or prisoners of war or who knows of such acts by troops under his command and fails to take proper action bears criminal responsibility.

A second Nuremberg trial which offers insights into the issue of command responsibility was the trial of Wilhelm List and others, commonly known as the "Hostages Case." Field Marshal Wilhelm List and 11 other German officers were brought to trial during the Nuremberg Subsequent Proceedings on the charge that they had committed war crimes and crimes against humanity. The charges reflected the cruel and bloody reprisals, including the shooting of hostages, that the German generals had inflicted on the populations of Greece, Yugoslavia, and Albania. All but two of the defendants were found guilty in varying degrees.[48]

The case affirmed the principle of the responsibility of the commander for the actions of his forces. On the other hand, specific evidence was introduced linking knowledge of the atrocities, as well as direction in some instances, to the defendants. Defendants in this case were unable to prove ignorance since lesser officials regularly reported all reprisals to the senior commanders. Several of the defendants were found not guilty of implementing the "Commissar Order" within their units although cases of its implementation were proven. The prosecution lost on such charges when it was unable to link the defendants with direct knowledge of the crimes.[49]

The implications of the Nuremberg Subsequent Proceedings for the issue of command responsibility are impressive. In a series of trials conducted under international auspices, panels of U.S. civilian judges, operating in a more judicial atmosphere than that which prevailed in Manila in 1945, rejected the doctrine of absolute command responsibility apparently established in the Yamashita case and established more limited and reasonable standards concerning a commander's responsibility for the actions of his command. The negligence of the commander had to be "personal." Knowledge of the crime had to be shown. The civilian judges at Nuremberg seemed better able than the generals at Manila to acknowledge the difficulties of discipline in unusual situations, the reliance of a commander on his subordinates, and the breadth and scope of activities under the control of senior military commanders.

Vietnam. Telford Taylor's allegations against General Westmoreland and other U.S. military commanders are based upon the underlying assumption that war crimes committed by U.S. forces have been so numerous that U.S. military leaders should have known of them and hence prevented them. This allegation has been stated more explicitly by others.[50]

How can the U.S. military leaders reply? This is a question which every military professional must be able to discuss. A reply to this question might proceed on two different planes. First, the number of criminal or unlawful acts committed by U.S. forces would not seem as widespread to a U.S. general as they would to a Telford Taylor or a Richard Falk because many of the acts considered unlawful by Taylor or Falk might be considered legal under international law. Second, U.S. military leaders could establish a vigorous affirmative defense through demonstration of the command policies, command briefings, individual briefings, and punishments rendered against perpetuators of unlaw-

ful acts. Each of the two planes will be briefly presented.

What are the unlawful acts charged against the United States? The charges include: excessive use of aerial and artillery firepower resulting in the unnecessary death of civilian, unlawful relocation of South Vietnamese civilians, wanton destruction of property, and torture and murder of prisoners of war.[51]

The first line of defense of a U.S. military leader against charges of widespread criminal activity in Vietnam is to assert that many of the acts branded unlawful by the "war crimes publicists" are acts which are legally defensible under the U.S. Government's interpretation of the international law of war. What is not understood by most of the public and is ignored by many of the military's detractors is that the number of criminal acts committed by U.S. forces is a function of how one addresses four specific issues: the international legality of the U.S. presence in Vietnam, the independence of the Saigon regime, the intent of the U.S. military commanders in implementing certain courses of strategy and tactics, and the reasonableness of the reply to a charge of conducting certain "unlawful acts" that the acts were indeed lawful. Telford Taylor acknowledged part of this matrix of issues in *Nuremberg and Vietnam.*[52]

The legality of the American presence and the independence of the Saigon regime place the legal relationship of the U.S. forces to the South Vietnamese citizens on a considerably different basis than that which would obtain if the U.S. forces were occupying South Vietnam following an invasion. The position that the U.S. Government can offer on this issue is at least as strong as the position of the Government's detractors. Persuasive briefs which a reasonable man should find believable have been written supporting the U.S. position.[53] Acceptance of the reasonableness of the legality of the U.S. intervention and the independence of the Saigon regime strengthens considerably the already strong legal defense of civilian relocation, for example. The citizens of a cobelligerent do not enjoy the same protections from their allies that the civilians of an occupied nation should expect from the occupier. A country's power to relocate its inhabitants in order to prosecute a war is virtually unlimited.[54] The lack of clamor concerning extensive relocation activities in Kenya and Malaya is mute evidence of international acceptance of such practices. One has to recognize only that the United States has a reasonable legal defense of its intervention, without accepting that defense, in order to undercut certain of the war crimes charges. Relocation activities may also be defended by recourse to the "Hostages case" at Nuremberg wherein the tribunal declared that the inhabitants of occupied territories may be relocated in order to prosecute antiguerrilla campaigns.[55]

Intent is perhaps the major consideration in the question of the use of airpower and artillery. If the United States intended to use air and artillery to terrorize the peasantry or for reprisals, as Neil Sheehan charges, then such use would probably be illegal.[56] On the other hand, a military commander may legally employ air and artillery firepower against a populated area from which he is receiving fire or which is offering armed resistance.[57] It is unfortunate but not illegal if the commander unintentionally erred in his judgment about the size of the force he faced and caused excessive civilian casualties. Precise estimates of enemy strength are extraordinarily difficult in fighting guerrillas in or near villages. Two snipers armed with Russian AK47 automatic rifles can sound like a platoon, thereby causing an opposing platoon commander to decide he needs

fire support to neutralize the enemy opposition.

The natural tendency of battlefield commanders is to take steps to avoid excessive casualties to their own units through the employment of all firepower means available to them. Admittedly, such practices can produce counterproductive results in guerrilla wars, but it is international legality and not effectiveness of counterinsurgency practices with which we are concerned. This tendency to minimize battlefield casualties results, to some extent, from the responsibility felt by American leaders to account to the American public for the lives of their sons. Lest anyone assert that manifestations of this tendency in Vietnam are evidence of racist attitudes toward "inferior peoples," one need only recollect the extravagant artillery and tactical airpower the United States employed against the Germans in Western Europe in 1944-1945.

In their concern with civilian casualties, the media representatives have lost sight of the fact that international law provides only the most rudimentary protections to civilians caught in the midst of combat operations. Although civilians enjoy an immunity from direct attack, it is not an absolute immunity. The law of war acknowledges that the killing and wounding of civilians is often an incidental aspect of the lawful conduct of military operations. Incidental injury to civilians is not unlawful so long as it does not violate a mandatory rule of the law of war, is justified by the rule of necessity, and the suffering caused is not disproportionate to the military advantage gained.[58] Even the more recent Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population in Time of War specifically recognize the limited nature of the immunity enjoyed by the civilian population.[59] As Telford Taylor puts it, "The death of an infant in consequence of military operations . . . does not establish that a war crime has been committed."[60]

The important point is that an informed and objective observer, viewing the battlefield, would not perceive as many unlawful acts as Richard Falk might see. The informed and objective observer would understand the intent behind many of the actions that others might consider unlawful and the specific context within which they occurred. Hence, it is a Procrustean feat to charge that the military leaders are guilty of war crimes because so many war crimes took place that they must have known of them and perhaps ordered them. Battlefield actions which in Richard Falk's view are criminal may seem lawful and necessary, even if tragic, to the knowledgeable officer.

It must be noted that the previously described defense of the military is asserted only within an admittedly narrow framework of international law since it is within this framework that the military's critics purport to operate as they accuse the United States of war crimes. The paper does not attempt to reply on the more transcendent moral plane.

The second part of the reply of the American military leader to the charge of war crimes would be to assert the number of actions taken to prevent war crimes. General Westmoreland, General Abrams, and the entire military chain of command can establish an active defense by demonstrating the steps taken in war crimes prevention—a case which none of the German or Japanese generals could argue. Space limitations preclude full development of the U.S. defense, but the outline will be sketched. The Vietnam participant can expand this from his own experience.

From the early days of the buildup of U.S. ground forces, the American command in Saigon took strong, active steps to minimize civilian casualties. The command action proceeded along three dimensions; (1) command policies

passed through the chain of command, (2) briefings for the individual soldier, and (3) investigation of apparent unlawful acts and punishment of perpetrators. Perusal of the Military Assistance Command Vietnam (MACV) files indicates that minimization of civilian casualties, treatment of enemy prisoners, and the rules of engagement which govern firepower use were major concerns of the U.S. commander. The records of the commanders' conferences held by General Westmoreland contain periodic warnings to this effect.[61] The policies and rules of engagement have been declared "virtually impeccable" even by Telford Taylor[62] and were eulogized by a representative of the International Committee of the Red Cross who pronounced the MACV policy for the handling of POW's, " . . . a brilliant expression of a liberal and realistic attitude."[63] Commanders' conferences down to division level usually included similar admonitions concerning civilian casualties, handling of POW's, and the rules of engagement.

A second aspect of U.S. policy concerns the briefs received by individual soldiers. Each soldier arriving in Vietnam received from his unit a briefing concerning the rules of engagement, attitudes toward civilians, and the handling of prisoners of war. More importantly, he was issued two small wallet-sized cards called, "Nine Rules" and "The Enemy in Your Hands." The "Nine Rules" stressed the necessity to maintain a humane attitude toward the Vietnamese people. "The Enemy in Your Hands" reiterated in simplified terms the provisions of the Geneva Convention concerning the handling of prisoners of war. Many commanders of combat units regularly inspected their commands to ensure retention of these cards.

Finally, one must take note of the punitive aspects of U.S. policy. MACV's policy required investigation of all allegations of unlawful acts and courts-martial where appropriate. During the period 1965 to 1971, investigated allegations of war crimes or of offenses of violence against Vietnamese nationals resulted in the conviction of 176 U.S. Army personnel and 22 sentences of life imprisonment to members of all services.[64] Some of the more sensational press stories about atrocities have resulted from evidence introduced at courts-martials. The fact that individuals were court-martialed for the offenses was underplayed in the rush to describe "current military practices."[65]

Conclusion. What conclusions can be drawn from this analysis? First, the legal realities of the Yamashita case differ considerably from the public perception. Contrary to references in recent books and articles, the Yamashita case did not establish a standard of absolute command responsibility wherein a commander could be held criminally liable for the actions of his command even if he was ignorant of their transgressions or was unable to influence them. The Military Commission which tried General Yamashita heard evidence which directly linked him to the knowledge of offenses committed by his troops. On the basis of this evidence, the Commission found Yamashita guilty of failing to control his subordinates. The case represents a reasonable standard of command responsibility which states that a commander can be held liable for the actions of his troops if he knows of them or blatantly ignores and fails to take appropriate action.

The Nuremberg Subsequent Proceedings provide a clearer example of limited command responsibility consistent with this paper's view of the Yamashita case. The Court in the "High Command case" was quite explicit in its rationale. The judgment stated that dereliction must be personal and knowledge must be shown in order to convict commanders for the offenses committed by their command. In view of the judicious and

restrained nature of the Nuremberg trials and the expansive rationale offered by the court, why is it that the war crimes publicists feel compelled to apply their version of the Yamashita case to U.S. conduct in Vietnam? The teachers and students of international law need to reconsider such actions.

The war crimes trials examined in this paper offer a reasonable and fairly unambiguous standard concerning command responsibility under the international law of war. A commander is responsible for the actions of his subordinates. He is required to take steps to prevent war crimes, to halt their continuation when he discovers them, and to punish the wrongdoers. He would be found guilty if he knew of crimes committed by members of his command or had reason to know of them and failed to take the requisite action. The tribunals left unanswered the degree of efficiency required from the commander in preventing war crimes, in discovering information about them, and in punishing wrongdoers. In many ways, this is the core issue between the U.S. generals and their accusers concerning Vietnam. The generals probably wish they had been more efficient in preventing unlawful actions. The accusers seem to be demanding perfection. Resolution of this dilemma lies in the question of "intent."

The Falks and the Sheehans seem to forget that culpability in war crimes often hangs on "intent." The legal defense available to U.S. leaders combined with a genuine demonstrated intent to minimize civilian casualties provides a defense of such strength that it strains the imagination of a knowledgeable observer to visualize any senior U.S. military leader being convicted under the Nuremberg precedent for U.S. practices in Vietnam.

Three conclusions emerge. First, the so-called Yamashita principle does not exist legally. Second, the Nuremberg trials established a standard of command responsibility which demands proof of personal negligence or personal participation. Third, the U.S. military actions in Vietnam are backed by a solid defense of policy, deeds, and intent.

BIOGRAPHIC SUMMARY

Lt. Col. Franklin A. Hart, Infantry, U.S. Army, is a 1971 Distinguished Graduate of the College of Naval Warfare. He graduated from the U.S. Military Academy, received a political science master's degree at Stanford, and taught U.S. foreign policy at West Point. Lieutenant Colonel Hart has extensive troop service in Korea, Panama, and the United States, in addition to commanding an infantry battalion in Vietnam in 1968-69. More recently, he served in the Office of the Under Secretary of the Army prior to his present assignment with the newly formed Combat Arms Training Board at Fort Benning, Ga. Lieutenant Colonel Hart's interest in the international law of war began at the Naval War College and has included the presentation of a paper on the subject to the annual convention of the American Society of International Law.

FOOTNOTES

1. As reported by Neil Sheehan in "Taylor Says by Yamashita Ruling Westmoreland May Be Guilty," *The New York Times*, 9 January 1971, p. 3:1.

2. Telford Taylor, *Nuremberg and Vietnam: An American Tragedy* (Chicago: Quadrangle Books, 1970), p. 182.

3. United Nations War Crimes Commissions, *Law Reports of Trials of War Criminals* (London: H.M. Stationery Off., 1947-1949). See volume VIII for the "Hostages Case" and volume XII for the "High Command Case." (Hereafter referred to as *UN Law Reports.*)

4. See footnotes 42, 43, 46 and 47 *infra.*

5. Taylor, p. 13-14.
6. See *UN Law Reports*, v. IV, for a complete discussion of the Yamashita case.
7. *Ibid.*, p. 4-6.
8. *Ibid.*, p. 34-35.
9. *Ibid.*, p. 17.
10. *Ibid.*, p. 84.
11. *Ibid.*, p. 19-20.
12. *Ibid.*, p. 35.
13. *Ibid.*, p. 34.
14. *Ibid.*, p. 35.
15. *Ibid.*, p. 19-20. See also footnote 20 *infra*.
16. General Headquarters, U.S. Army Forces, Pacific, Office of the Theater Judge Advocate, *Review of the Record of Trail by a Military Commission of Tomoyuki Yamashita, General, Imperial Japanese Army*, 26 December 1945. (Hereafter referred to as *Review*.)
17. *Ibid.*, p. 64-65.
18. Taylor, p. 91-92.
19. *Review*, p. 71-73, 81.
20. *Ibid.*
21. *Ibid.*, p. 78.
22. *Ibid.*, p. 74.
23. *Ibid.*, p. 81-83.
24. *In Re Yamashita*, 327 U.S. 14-16.
25. *Ibid.*, p. 17.
26. John P. Frank, *Marble Palace, the Supreme Court in American Life* (New York: Knopf, 1958), p. 136-137.
27. *In Re Yamashita*.
28. *Ibid.*, p. 40.
29. *Ibid.*, p. 45.
30. *Ibid.*, p. 61.
31. *Ibid.*, p. 13-23.
32. Taylor, p. 91-92.
33. *In Re Yamashita* at 28, 34, 47, 53-55.
34. A. Frank Reel, *The Case of General Yamashita* (Chicago: University of Chicago Press, 1949).
35. Taylor, p. 91-92. See also Homer Bigart, "Medina's First Juror Tentatively Accepted as Mylai Court Martial Opens," *The New York Times*, 27 July 1971, p. 5:1; Peter Braestrup, "Jury Head Selected for Medina Trial," *Washington Post*, 27 July 1971.
36. *UN Law Reports*, v. IV, p. 18-20; *Review*, p. 71-73.
37. *In Re Yamashita* at p. 28.
38. John A. Appleman, *Military Tribunals and International Crimes* (Indianapolis: Bobbs-Merrill, 1954).
39. See *UN Law Reports*, v. XII for an analysis of "High Command Case." The case is reported in detail in Germany (Territory under Allied Occupation 1945–U.S. Zone) Military Tribunals, *Trials of War Criminals Before the Nuremberg Military Tribunals under Control Council Law No. 10, Nuremberg October 1946-November 1949* (Washington: U.S. Govt. Print. Off., 1951), v. X and XI. (Hereafter referred to as *Trials of War Criminals*.)
40. *Ibid.*, v. X, p. 29-37, 44-47, 125-138.
41. *Ibid.*, v. X, p. 1090-1101.
42. *Ibid.*, v. XI, p. 333-334.
43. *Ibid.*, v. XI, p. 553-563, 695, 698.
44. *Ibid.*, v. XI, p. 543-544.
45. *Ibid.*, v. XI, p. 545.
46. *Ibid.*, v. XI, p. 555.
47. *Ibid.*, v. XI, p. 558.
48. See *UN Law Reports*, v. VIII, for an analysis of the "Hostages Case." The case is covered in detail in *Trials of War Criminals*, v. XI.
49. *Trials of War Criminals*, v. XI, p. 1269, 1275.
50. See the discussions contained in Edwin Knoll and Judith McFadden, eds., *War Crimes and the American Conscience* (New York: Holt, Rinehart and Winston, 1969).
51. Neil Sheehan, "Should We Have War Crimes Trials?" *The New York Times Book Review*, 28 March 1971, p. 1-3, 30-34; Lawrence C. Petrowski, "Law and the Conduct of the

Vietnam War," Richard A. Falk, ed., *The Vietnam War and International Law* (Princeton, N.J.: Princeton University Press, 1969).

52. Taylor, p. 131, 133-134, 146, 177.

53. As examples, consider: John Norton Moore, "The Lawfulness of Military Assistance to the Republic of Vietnam," *American Journal of International Law,* January 1967, p. 1-34; Leonard C. Meeker, "Viet-Nam and the International Law of Self Defense," *Department of State Bulletin,* 9 January 1967, p. 54; Roger H. Hull and John C. Novogrod, *Law and Vietnam* (Dobbs Ferry, N.Y.: Oceana, 1968).

54. Article 4 of the 1949 "Geneva Convention Relative to the Protection of Civilian Persons in Times of War," (TIAS 3365), *U.S. Treaties, etc.* (Washington: U.S. Govt. Print. Off., 1956), v. VI, pt. 3, p. 3520 (hereafter referred to as "Geneva Civilian Convention") states: "Persons protected by the Convention are those who, at a given moment and in any manner whatsoever, find themselves, in case of a conflict or occupation, in the hands of a Part to the conflict or Occupying Power of which they are not nationals."

55. *Trials of War Criminals,* v. XI, p. 1249-1250. In addition, article 49 of the 1949 Geneva Civilian Convention states: " . . . the Occupying Power may undertake total or partial evacuation of a given area if the security of the population or imperative military reasons so demand."

56. Sheehan, "Should We Have War Crime Trials?"

57. Lassa F.L. Oppenheim, *International Law: A Treatise,* 7th ed., H. Lauterpacht, ed. (London: Longmans, Green, 1952), v. II, p. 346, 525; *Trials of War Criminals,* v. XI, p. 541, 1253-1254.

58. W. Solf, "A Response to Telford Taylor's Nuremberg and Vietnam: An American Tragedy," *University of Akron Law Review,* v. V, no. 1, p. 49-50.

59. International Committee of the Red Cross, *Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population* (Geneva: 1956).

60. Taylor, p. 135.

61. See *Report of the Department of the Army Review of the Preliminary Investigation into the My-Lai Incident,* March 1970, p. 9-14, 9-15, (hereafter referred to as the *Peers Report*) for discussions of command emphasis. For example, at the commanders conference at Nha Trang on 24 October 1965, General Westmoreland cautioned his subordinates about minimization of civilian casualties at four different points in his remarks as he discussed: indoctrination of U.S. troops, issuance of the "Nine Points" card, the report of a board formulating Rules of Engagement, and the use of prudence in the employment of naval gunfire support. This set of remarks was characteristic of those used at other commanders conferences.

62. Taylor, p. 168.

63. Gardner M. Haight, "The Geneva Convention and the Shadow War," *United States Naval Institute Proceedings,* September 1966, p. 47.

64. An informal review of records of trial by general court-martial and those special courts-martial authorized to adjudge a bad conduct discharge received by the U.S. Army Judiciary as of approximately 1 June 1971 reveals that from 1965 to the date of the survey, 176 U.S. Army personnel had been convicted of offenses in which the victim was identified as a Vietnamese. At the time of Calley's conviction, the New York Times News Service reported that Calley was the 22d U.S. serviceman sentenced to life imprisonment for the premeditated murder of a Vietnamese civilian. See also statistics at Solf, p. 67.

65. See Daniel Lang, *Casualties of War* (New York: McGraw-Hill, 1969) which also appeared in the 18 October 1969 issue of *The New Yorker.* Book reviews and accounts of this tale of rape and murder seldom mentioned the fact that the tale was told from the court-martial records. See Taylor, p. 134.

Ψ

No civilized war, however civilized, can be carried on on a humanitarian basis.

BGEN Jacob H. Smith, USA: General Order to U.S. Forces on Samar, October 1901

A critical factor to the continuing vitality of any large organization is its ability to accurately evaluate the technical and managerial abilities of all its members with the goal in mind of advancing only those individuals to positions of authority whose ability and performance are commensurate with the responsibility they must bear. While the Navy's selection and promotion system is generally held to be equal or superior to most others, shortcomings in the design of officer fitness reports as well as the unmanageable volume of data which selection boards are expected to digest suggest that today's system can be streamlined and improved. A computerized system would prove to be a valuable tool to selection boards, overcoming many of the weaknesses and inequities of the present manual system while retaining the human element in the selection process.

AUTOMATING THE NAVAL OFFICER SELECTION AND PROMOTION SYSTEM

An article

by

Captain G.H. Lewis, U.S. Navy

I

Introduction. The selection and promotion system for officers in the U.S. Navy has followed an oscillating course for the past two generations. Though this system has been oriented toward a single goal, the promotion of the best fitted or most qualified officers, its environment and its inherent weaknesses have caused it to vacillate sufficiently to cast some doubt on the system's ability to achieve this goal in all cases. However, a cursory review of the promotion systems used by some of the other services in the Department of Defense, together with other governmental agencies, reveals that the Navy system is equal to or superior to the others. The military facet of the Department of Defense has, in fact, one of the better systems for promotion from within individual organizations. Having served as president of a selection board, Vice Adm. Fitzhugh Lee remarked in an analysis of the system:

> I am personally convinced, after looking at the promotion systems of many civilian organizations, of foreign navies, and of our own services in the Department of Defense, that none has a better selection system than the one we have evolved. Ours is far from perfect; however, we can indeed be thankful that our selection system is completely free from such things as nepotism, marrying the boss' daughter, owning stock in the company, and having the

> top jobs nabbed by superior talents hired away from another company. All these things occur in the selection systems which affect most of our fellow Americans.[1]

Nevertheless, because of human frailties in the Navy system, there are injustices. Miscomprehension and misinterpretation of various elements of the system have been instrumental in the loss of some of the best fitted officers. These injustices can be laid to the judge and the jury and not to the individual officer being considered for selection and promotion. The admiral's analysis does not pinpoint where the system is "far from perfect"; however, these imperfections will be readily apparent in a subsequent discussion of the current system.

Report of Fitness. The primary record used by the selection boards has been the report of fitness, the format of which has undergone continuing change throughout the years. The four major grading areas on the report of fitness are Section 15, Performance of Duty; Section 16, Desirability; Section 18, Overall Evaluation; and Section 20, Personal Characteristics. The additional comment area is included to expand on any strengths or weaknesses of the officer. The remainder of the report is oriented toward administrative information such as duties assigned, the employment of the command during the reporting period, and recommendations for future assignments.

It is on this record that the selection board concentrates its attention. It must examine each report of fitness in detail for each officer under consideration. This information must be digested and compared with all other officers under consideration, a process which entails dealing with voluminous data. For example, the average number of reports of fitness for an officer with 12 years' active-duty service can approach 24. At this point in a naval officer's career, the attrition rate approximates 25 percent, and many of those attrited will have to terminate their careers on a subsequent passover by a selection board. The selection board attempts to measure each officer's record, using the same yardstick in order to determine the relative standing of those under consideration, and thus ascertain those best fitted for selection. This is a difficult task in view of the data involved. Considering the selection of lieutenants to lieutenant commander, approximately 2,500 officer records may be involved, and, using an average of 24 reports of fitness for each officer, the nine-member board would have to review 60,000 fitness reports.

In earlier years the members of the various selection boards devised their individual methods of correlating the vast amount of data to arrive at a list of officers recommended for promotion. The task of many selection boards has been reduced considerably by the use of the briefing sheet illustrated in Captain Scanland's article in the June 1963 *Proceedings*.[2] These sheets provide a one-line summary of the marks assigned on each report of fitness received by the Bureau of Naval Personnel. The use of the briefing sheet affords the selection board better visibility of an officer's performance pattern.*

Selection board operations are like human beings—no two are alike in every respect. However, they do follow similar patterns. The majority of the members of the selection boards have never been involved in an experience similar to the operations of a selection board, and thus they rely heavily on any member who has previously served on a board

*Clerks convert the marks assigned by reporting seniors on reports of fitness to numerical marks on the briefing sheets. These sheets are available to the selection boards and the Bureau of Naval Personnel assignment officers. At the present time they cannot be reviewed by the individual officer involved.

and, to some extent, on the experience of the recorder. Captain Scanland's typical selection board operations adequately describe the routine.

Weaknesses in the Selection System. Adm. Arleigh Burke, while serving as the Chief of Naval Operations, cautioned:

> Officers must have confidence in the promotion system or discipline will be jeopardized. Unless the best officers are promoted, faith of other officers and enlisted men in the integrity of the system will be shaken. It is essential that officers be promoted who will be best qualified to lead in battle. They must have other qualifications, such as good administrative and technical ability and a wide array, of knowledge also, but the rest of the Navy must have absolute confidence in those selected. Should the less qualified personnel be selected there will come a time in battle in which the Navy will fail because of its leadership. Like begets like, and inadequate personnel, once they have moved up sufficiently to be on a selection board, will themselves be apt to select other inadequate personnel.
>
> Standards must be very high, they must be attainable, they must be equitable, they must be well-known and they must be maintained with integrity. Otherwise the officer corps will decay and decay rapidly, and there will be no effective combat Navy if this happens.[3]

Leading off with this word of caution, the inherent weaknesses of the selection and promotion system can be examined critically. There are two major areas to consider—the report of fitness and the selection of officers based on it. Each one has inherent weaknesses and both are interdependent. With respect to the former, the fitness report and its effects are neither well known nor understood by the majority of reporting seniors nor those judging the officers reported on. In the latter, the preponderance of data that must be carefully reviewed, weighed, and compared by a jury of nine men makes the integrity of the system suspect. Although the two areas will be discussed separately, their combined effects will be noted.

The structure and the wording used in the fitness report creates the impression that grades are based on normal distribution curves, the famous bell-shaped curve. This curve is shown in figure 1 with the grading structure of section 15 of the fitness report superimposed thereon. This is the usual view the judges perceive as they assign marks to those officers under their command.

However, the actual distribution of grades under section 15 is more akin to the curve shown in figure 2, and this is the view on which the selection board must base its deliberations. Thus, the judge may consider that his marking of the officer places him in the upper half of his contemporaries whereas, in fact, the mark assigned places the officer in the lower half. Although this may not affect the officer's selection in the early stages of his career, it can be detrimental when the attrition rate is extremely high.

Using the same curve portrayed in figure 2, figure 3 is an example of the effects of attrition through the successive officer grades. Thus, a junior officer receiving a mark in the lower half of the Excellent column can well be a borderline case when considered for selection to commander and would probably not be selected for captain.

Another weakness noted in reports of fitness has been a tendency of some judges to grade junior officers in the ensign and lieutenant (junior grade) categories in the Satisfactory and Very Good columns. This weakness can be

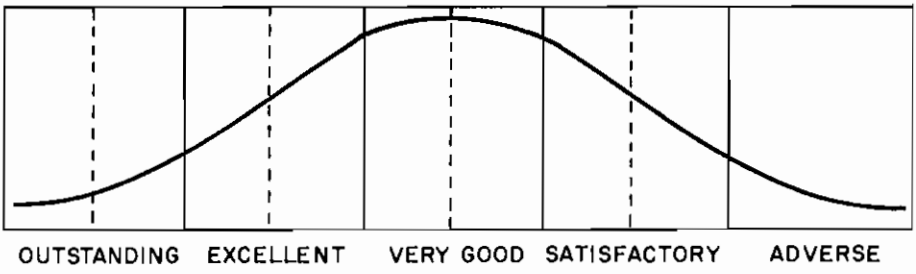


Fig. 1—Normal Distribution (Performance of Duties Superimposed)

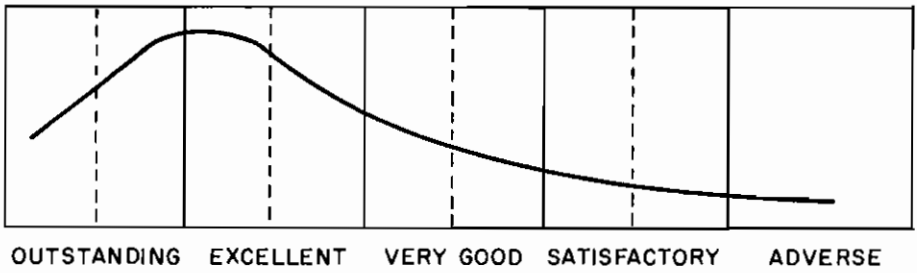


Fig. 2—Sample Distribution of Performance of Duty Marks Assigned

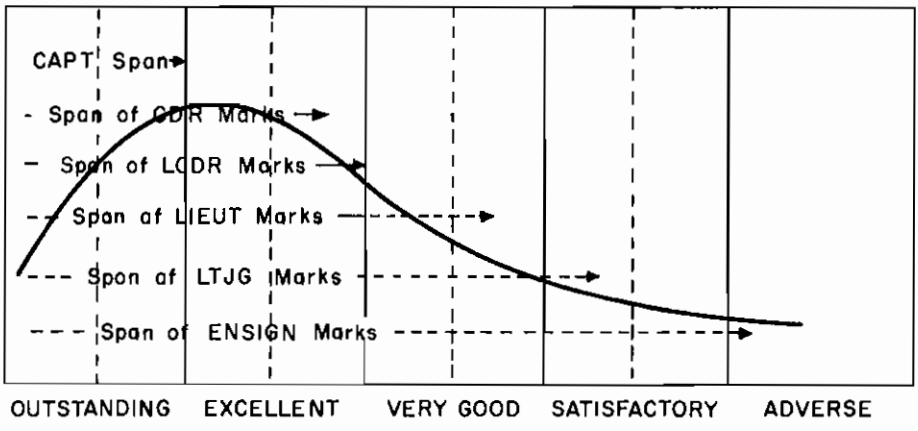


Fig. 3—Attrition Versus Distribution of Marks

attributed to a tendency to compare junior officers with more seasoned officers despite the notation in section 13 of the report of fitness: "All evaluations made in this report shall be in comparison with other officers of the same grade, competitive category, and approximate time in grade . . .." The Bureau of Naval Personnel noted this weakness when they promulgated the following:

> It has been noted with concern that some reporting seniors are justifying low marks on fitness reports with comments to the effect the "ENS BLANK is a fine fellow, but lacks experience. As he matures and gains experience, he will become an excellent officer." . . .. In the case of newly commissioned officers, it may be entirely correct to mark an Ensign OUTSTANDING, even though he has no previous experience, and no qualifications. If he impresses the reporting senior by his demeanor and efforts as performing far above other officers with equal service, the mark is justified. The decision must rest with the reporting senior, and must be based upon his judgements and experience. In each case the officer must be compared with officers of his rank and length of service.[4]

With some judges adhering to the principles stated by the Bureau and other judges overlooking the principles, an unequitable standard is created. In those cases when selection boards consider the entire career reports of the officer under consideration, the disparity in the early marks assigned may be sufficient to select one officer and not select another.

A weakness in the report of fitness involves the words used to describe each of the marking levels. What is the numerical crossover point between good and excellent in the mind of the grader? The wide variance between graders, ranging from the harsh to the lenient, results in inequities when viewed realistically. The optimists of the current system believe all officers will eventually encounter an equitable number of harsh and lenient graders, and thus their selection opportunities will be based purely on their actual performance of duty. This optimism has no foundation if a careful analysis is made. These same individuals feel the lenient grader, as well as the harsh grader, will be uncovered by the nine-member jury.

The ability of the selection board to ferret out high and low graders would be questionable during their review of approximately 60,000 reports of fitness, as in the case of lieutenants to lieutenant commanders. Although briefing sheets condense the information on the 60,000 reports, there are still nine important data elements included with each reporting senior's name. Correlation of this type of information by the members of the selection board would be overwhelming.

The numerous ground rules that must be applied to all the data in each officer's record multiplies the problem confronting the selection board. Considering the number of reports involved and the four major grading areas within each report, the task of the selection board is awesome. Although it attempts to measure the performance of each officer with an identical yardstick, the board is composed of nine members with individual characteristics and weaknesses. Marks assigned to an officer serving on small craft may not be weighed as heavily by one reviewer as marks assigned for aircraft carrier duty. Other reviewers may hold the opposite philosophy, and as ground rules are not set forth for each case, there can be individual grading standards used within the selection board.

A related weakness within the selection board is the varying weight of each individual mark assigned to an officer under consideration. An attempt is

made to adjust the weight of each mark by the period of time the mark covered--1 year, 6 months, or 4 weeks. In addition, an attempt is made to adjust marks for the primary duty the officer filled during the time frame of the report and the employment of the officer's command. For example, an excellent mark for an officer serving as ship's librarian while the ship is employed in local homeport exercises may not deserve the same weight as an excellent mark for an officer serving as gunnery officer while the ship is employed in wartime operations. The application of these varying weights uniformly by the selection board throughout all the records being reviewed defies acceptance.

Summary. The volume of data associated with the selection and promotion of naval officers cannot be adequately reviewed, digested, and accurately weighed by nine individuals composing a selection board. Gregory and Van Horn, two noted authors in the field of data processing, stated:

> The quality of information is influenced by the degree of detail obtained about each event that occurs. Some details are lost when gathering facts about events because it is economically impossible to capture all the facts. The question is how much detail can be discarded and a useful quality representation of events still maintained. Pragmatic mistakes—wrong decisions based on the right picture—can occur at the point where information is used. A pragmatic mistake can arise because the decision rule is incorrect . . .. Then, too, the correct rule could be incorrectly applied . . ..
>
> It is easy to produce an excessive quantity of information. Care must be taken to keep information tailored to a user's needs and restricted to his ability to use it.[5]

The integrity of the selection board members cannot be questioned; however, their ability to use the excessive quantity of information furnished them and their ability to arrive at a proper decision in all cases is the questionable facet. The quality of the information, through misrepresentation by reporting seniors, is also questionable and adds to the dilemma. As a result, the total system with its various weaknesses cannot achieve fully its lofty goal of the selection and promotion of the best fitted.

The current information explosion demands the most effective and efficient means be used to handle management data. More and more organizations are turning to the computer to handle the volume of data generated. This new tool has performed herculean tasks in assisting managers. Why not the selection board? Almost inevitably there will be cries from the uninformed that computerization would remove the human element from the selection board process. Several assignments to a selection board and a familiarity with the potential of computers would soon dispel any doubts as to the value of computerizing the selection and promotion systems.

II

The Computerized System. Inasmuch as the foundation of all systems is based on the quality of the material or information supplied, we should be initially concerned with designing a fitness report system that will provide the best information for the selection process. Figure 4 portrays the elements considered essential to the report of fitness. While it differs appreciably from the present report of fitness, it does retain those major elements considered by today's selection boards. The frills and fat have been trimmed together with

I. Officer's Identity

a. Social Security Number
b. Last Name and Initials

II. Officer Information

a. Rank
b. Time in Grade
c. Designator
d. Command/Activity
e. Employment of Command
f. Primary Duty
g. Collateral Duty

III. Evaluation

Category	Not Obs/App	Pass-Over 0	80% Select 1	60% Select 2	40% Select 3	20% Select 4	10% Select 5	Deep Select 6	Relative Weight
Primary Duty									4
Collateral Duty									1
Executive Management									*2
Technical Competence									*2
Human Relations									2
Communications									2
Behavior									1
Appearance									1
Bonus									

IV. Reporting Senior's Identity

a. Name
b. Rank
c. Social Security Number

V. Authentication

a. Signature of Reporting Senior
b. Date Signed

VI. Report Data

a. Evaluation Period
b. Basis of Evaluation

Fig. 4—Proposed Report of Fitness Elements

excess wording used to explain each entry. These explanations are best left to a single basic instruction. Information used for future assignments and qualifications is deleted in that such information is deemed more appropriate for an assignment or detailer-type report rather than an evaluation report used by selection boards. The skeletonized report of fitness is more in keeping with the trend toward avoiding the flood of information that is drowning today's managers.

The best means for identifying the officer being judged and correlating all data relating to him is his Social Security number. The remainder of the officer's identity section and the officer's information section are self-explanatory. The command, its employment, and the officer's primary duty, together with the evaluation, form the major criteria for the selection or non-selection of the officer. Proper weight can be assigned to the various billets based on the challenge and command involved.

The most important element of the report of fitness is the reporting senior's evaluation of an officer. Misinterpretation of this element by either the reporting senior or the member of the selection board can be disastrous to an officer. Therefore, this element has been oriented toward the selection criteria, rather than word descriptions of performance. This disparity of word description is evident in the report of fitness used from 1962 to 1968, wherein Excellent in its section 14 was the second highest grade, while in section 20 the same word ranked the officer fourth in the grading system. The evaluation section shown in figure 4 provides seven grade levels and a "not observed/applicable" column for eight categories of the nine listed. These grading levels vary from "Pass-Over," the lowest, to "Deep Select"—i.e., accelerated promotion. The percentile levels falling between the two extremes allow the reporting senior to indicate his evaluation of the officer relative to his selection. For example, if a reporting senior marks an officer in the 40 percent Select column, he indicates to the board that if

40 percent of the officers under consideration for the next higher rank are to be selected, he feels the officer should be selected. However, if only 20 percent of the officers under consideration are to be selected, then the reporting senior feels that the officer should not be selected. This word from the judge has more meaning to the jury, who must decide the officer's promotional fate, than words such as "good," "excellent," or "outstanding." It also provides the judge with the knowledge of exactly how the selection board will interpret his evaluation of the officer, rather than rely on the infamous "normal" distribution curve.

Incorporated into the evaluation section is the relative weight of each of the categories listed. This element provides the reporting senior a true reflection of how much weight each of his assigned evaluations will be given by the selection board. It also restricts the board as to how much weight should be given to each mark assigned, except in the case of Executive Management and Technical Competence. The relative weight assigned to these two categories is varied, depending on the rank of the officer under consideration; however, the total weight of the two cannot exceed 4.

The first eight categories generally summarize the majority of characteristics sought by many evaluation boards. Some have been extracted directly from the U.S. Air Force Manual dealing with officer effectiveness.[6] Others have been based on information contained in the Navy's instruction concerning the evaluation of officers.[7] The ninth category, Bonus, provides some flexibility to the judge. The Primary Duty and Collateral Duty categories need no detailed explanation.

The next two categories of evaluation, Executive Management and Technical Competence, require some explanation. These two have a combined relative weight of 4, which can be varied depending on rank. Normally, a weight of 3 would be given to the Technical Competence category and a weight of 1 to the Executive Management category for the junior officer. The relative weights would be equal at the midpoint of the officer's career, in the lieutenant and lieutenant commander grades. In the commander and captain grades, the relative weights would be 3 for the Executive Management evaluation and 1 for the Technical Competence. Thus, these two categories provide the necessary variable essential to judging the officer against a yardstick that changes with the ascent of the individual through the officer grade structure.

Human Relations, Communications (both oral and written), Behavior, and Appearance categories are sufficiently understood to require no lengthy dissertation in the interest of brevity. However, the last category, Bonus, deserves elaboration. As a direct additive with no relative weight divisor, this category provides an area whereby special consideration can be given for those attributes the reporting senior considers worthy of note, but which are not included in other categories. These might include such things as heroic actions under battle conditions, participation in community affairs which bring credit to the naval service, noteworthy activity with the Boy Scouts or other youth programs, scholastic endeavors and achievements during off-duty hours. The maximum bonus allowed under this category is 3.

Following the evaluation of the officer, other pertinent data included in the report of fitness are the name, rank, and Social Security number of the reporting senior, the signature of the reporting senior for authentication together with the date signed; the period covered by the evaluation; and the basis upon which the evaluation was made. This latter provides the selection board a confidence factor in the evaluation marks assigned. The basis of the report can vary from "Daily Contact and Close

Observation" to "Records and Reports Only." A special code within this element allows the reporting senior to indicate if the report of fitness is a concurrent report.

The next step is to orient these elements for automatic data processing. Several methods of optical scanning are currently under development. They vary from an intricate method of converting data written in longhand to computer characters, through a simple method of converting data transcribed on a preplanned form to computer characters. This latter method will form the basis for the design of the report of fitness proposed. Although it is not the ideal method, it is capable of supporting the system now.

Report Format. Figure 5 illustrates the proposed report of fitness suitable for direct computer introduction through an optical scanner. Only one check is required prior to introduction into the computer, and that is to confirm that the report is authenticated with the signature of the reporting senior. The name and designator of the officer will not be introduced into the computer from the form as these are considered superfluous to the system at this point.

The Social Security numbers of both the officer being judged and the reporting senior can be indicated directly on the form by marking the proper numerals. In addition, for the originator's confirmation, the numbers can be transcribed above the line for easy readability; however, information transcribed directly above any line on the format will not be "read" by the optical scanner. A check area is included for verification of the Social Security number as it is the key to the entire system and provides the necessary integrity.

The rank columns for both the subject officer and his reporting senior extend from 1 through 0 plus "A."

The Time-In-Grade (TIG) column extending from 0 through 9 indicates the years in grade directly. The "A" indicates 10 years and over in grade.

The Command section is divided into four major areas: Ship, Air, Fleet Staff, and Shore. Each of these areas can then be further identified by a code number representing the specific command or activity. Pertinent data relative to the employment of the command is also included.

The Period of the Report section allows direct transcription of the numerical month and last two digits of the year for the "From" and "To" dates.

The Primary and Collateral duties are represented by five digit numerical codes. These codes are based primarily on the *Manual of Navy Officer Classification.*

The Evaluation section on the proposed form lends itself to direct transcription with no need for coding, only familiarity with the meaning of the categories. The reporting senior marks his evaluation of each category under the proper column.

The Report Basis uses the numerals 1 through 6 and the letter "C," table I, describes the meaning of these characters.

TABLE I—REPORT BASIS CODE

1	Daily Contact and Close Observation
2	Frequent Observation
3	Primarily Supervisor's Observation
4	Infrequent Observation
5	Results of Work Only
6	Records and Reports Only
C	Concurrent

System Operations. The proposed computerized selection and promotion system consists of five major files, three identify files and two operational files. The identify files would primarily be used for providing identity to various numerical codes throughout the system, whereas the two operational files—the Evaluation File (File #1) and Reporting Senior's Multiple File (File #2)—would

Evaluation Report of _____ Designator _____

Social Security No	Check	Rank	TIG	Command	Command Code #	Period of Report YR MO	to YR MO	Primary Duty	Collat Duty
000000000	0000	A	0	Ship	-0000000	000	000	00000	00000
111111111	1111	O	1	Air	-1111111	111	111	11111	11111
222222222	2222	9	2	Staff	-2222222	222	222	22222	22222
333333333	3333	8	3	Shore	-3333333	333	333	33333	33333
444444444	4444	7	4	Employment	-4444444	444	444	44444	44444
555555555	5555	6	5	Peace	-5555555	555	555	55555	55555
666666666	6666	5	6	War	-6666666	666	666	66666	66666
777777777	7777	4	7	Deployed	-7777777	777	777	77777	77777
888888888	8888	3	8	Fleet	-8888888	888	888	88888	88888
999999999	9999	2	9	Indp	-9999999	999	999	99999	99999
		1	A	Forgn					

EVALUATION

Category	Not Obs/App	Pass-Over	80% Select	60% Select	40% Select	20% Select	10% Select	Deep Select	Relative Weight	Report Basis
		0	1	2	3	4	5	6		
Primary Duty									4	
Collateral Duty									1	1
Executive Management									*2	2
Technical Competence									*2	3
Human Relations									2	4
Communications									2	5
Behavior									1	6
Appearance									1	C
Bonus									-	

Reporting Senior's Social Security No	Check
000000000	0000
111111111	1111
222222222	2222
333333333	3333
444444444	4444
555555555	5555
666666666	6666
777777777	7777
888888888	8888
999999999	9999

Reporting Sr.'s Rank: A 0 9 8 7 6 5 4 3 2 1

Name & Signature of Reporting Senior _____ Date _____

Fig. 5—Report of Fitness

contain the data essential to the evaluation of officers. Figure 6 depicts the contents, fields, and field lengths of these two operational files. The majority of the data in File 1 is self-explanatory and based on previous discussions of the redesigned report of fitness. The meaning of File 2 and the remaining areas of File 1 will become clear as we proceed with the subsequent operational discourse of the system.

Two operational phases would be involved in the computerized system. The first phase is the day-to-day updating of the two operational files, Files 1 and 2, when the reports of fitness are received. The second operational phase is the actual selection process.

The flow chart shown in figure 7 depicts the general operations in the first phase using a random access type computer. The sequence is initiated upon receipt of the report of fitness. From the data provided, the computer calculates the officer's multiple from the evaluation section. Each category evaluation is multiplied by its relative weight, and the summation of this weighted evaluation is divided by the summation of the weights considered. The example shown in figure 8 illustrates the determination of a lieutenant commander's multiple. The multiple is incorporated into field 11 of the officer's evaluation file and added to field 10 of the reporting senior's multiple file—File 2, for lieutenant commanders. Field 9 of File 2 is incremented by 1 and the average multiple is recalculated and incorporated in field 11 of File 2 and field 16 of the officer's evaluation in File 1. Figure 9 illustrates the updating of the reporting senior's file for the lieutenant commander category. The final action of the updating routine is the on-line storage of the officer's evaluation file and the updated reporting senior's multiple file.

The second operational phase of the system is illustrated in flowchart format in figure 10. This phase is initiated with the establishment of the selection zone. The precedence numbers of all officers within the zone are introduced into the computer, and from these numbers the Social Security numbers of all reporting seniors are obtained from File 1. The resulting numbers are augmented with each reporting senior's average multiple for the rank involved obtained from File 2. The selection zone average multiple

1. EVALUATION FILE (Stored in order of Precedence Numbers)

Field:	(1)	(2)	(3)
	Precedence No. - 8;	SocSecNo - 9;	Check - 4;
Field:	(4)	(5)	(6)
	Reporting Period - 8;	Command Type - 1;	Command - 7;
Field:	(7)	(8)	(9)
	Employ - 4;	Pri Duty - 5;	Collateral Duty - 5;
Field:	(10)	(11)	(12) (13)
	Evaluation - 9;	Multiple - 4;	Basis - 1; Rank - 1;
Field:	(14)	(15)	(16)
	Rpt.Sr.SocSecNo - 9;	Check - 4;	Rank Avg.Mult.to Date - 3.

2. REPORTING SENIOR'S MULTIPLE FILE
(Stored in order of Social Security Numbers - increasing)

Field:	(1)	(2)
	SocSecNo - 9;	Check - 4.

	CAPT	CDR	LCDR	LT	LTJG	ENS	WO
No. Evals - 4	(3)	(6)	(9)	(12)	(15)	(18)	(21)
Total Multiples - 6	(4)	(7)	(10)	(13)	(16)	(19)	(22)
Average Multiples - 3	(5)	(8)	(11)	(14)	(17)	(20)	(23)

Fig. 6—Operational Files

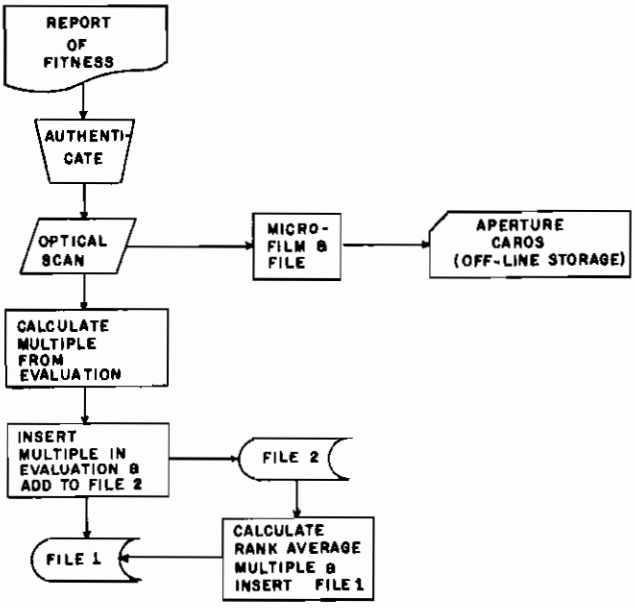


Fig. 7—Flowchart—Updating Routine

EVALUATION

Category	NA	0	1	2	3	4	5	6	Weight	
1							X		4 =	20
2						X			1 =	4
3							X		*2 =	10
4						X			*2 =	8
5						X			2 =	8
6						X			2 =	8
7							X		1 =	5
8						X			1 =	4
9					X	-	-	-	- =	3
						Sum			15	70

Evaluation Multiple = 70 ÷ 15 = 4.66

Fig. 8—Exemple of Officer Multiple Determination for Lieutenant Commander

	LCDR		New Eval Multiple		LCDR'
No. Evals.	37	+	1	=	38
Total Multiples	204.96	+	4.66	=	209.62
Average Multiple	5.54				5.52

New Average Multiple = 209.62 ÷ 38 = 5.52

Fig. 9—Exemple of Updating Routine for Reporting Senior's Multiple File - LCDR to LCDR'

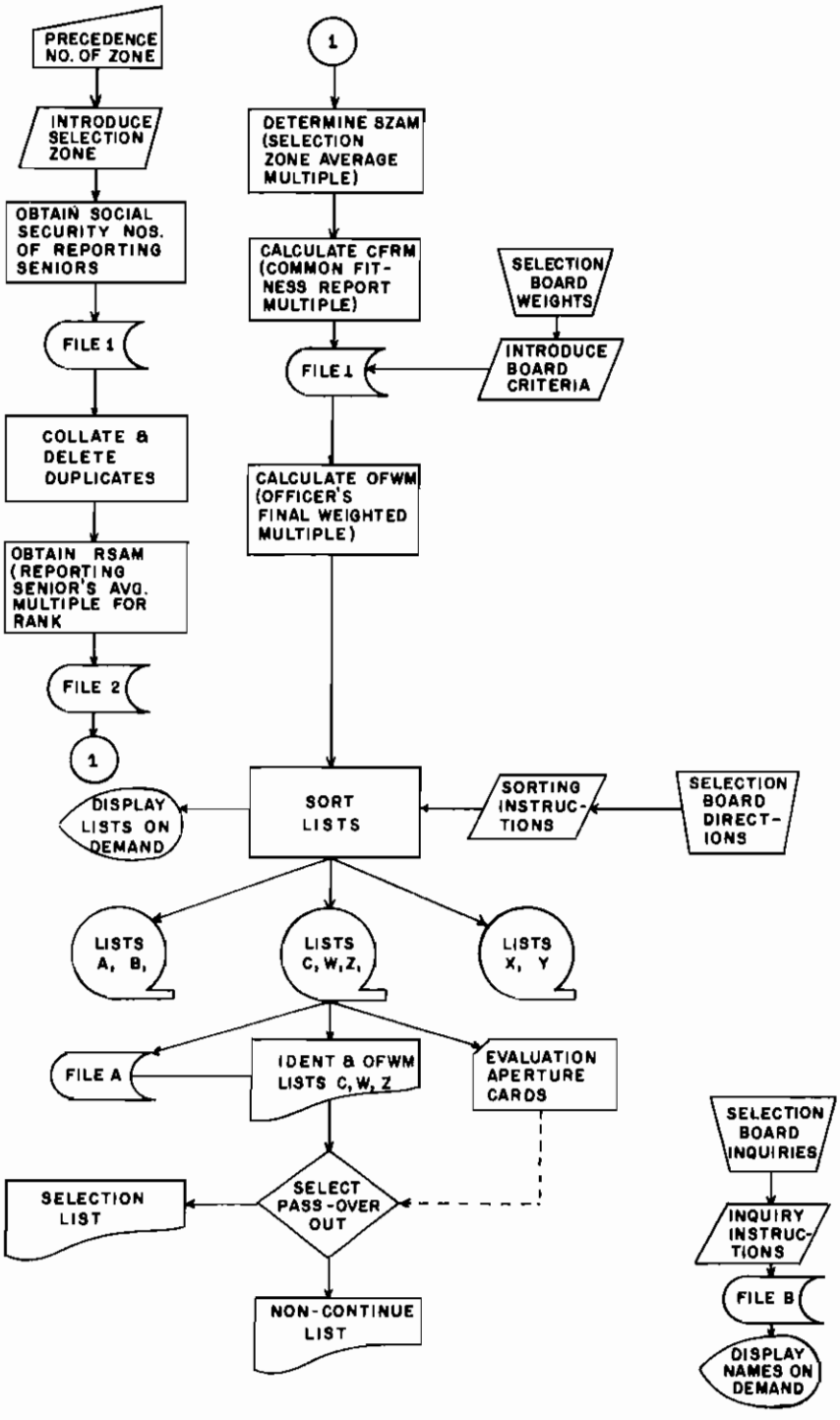


Fig. 10—Selection Flowchart

(SZAM) of reporting seniors is then determined by adding all their average multiples and dividing by the number of reporting seniors involved. The next step is to equate each fitness report multiple (FRM) of every officer with his reporting senior's average multiple (RSAM) as compared to the selection zone average multiple (SZAM). This establishes a common fitness report multiple (CFRM), and it is calculated as follows: CFRM = FRM ÷ RSAM x SZAM.

The calculation of a common fitness report multiple for all officers in each selection zone is a fixed process in the second operational phase of the proposed system. The follow-on process is flexible, and its parameters are determined by the individual selection boards. The process can be divided into two parts, the selection criteria and the sorting direction.

In the selection criteria process, ground rules are established by the selection board for fixing weights to the various elements of the evaluation report. This area is the heart and control of the computerized system, and its inputs are based on the experience and expertise of the members of the selection board. There are seven elements which can be weighted by the board, not including the rank of the reporting senior, which could also be a weighted element. The seven elements are the type command, the command, the employment of the command, the primary duty, the collateral duty, the length of the reporting period, and the basis of the report. All programs are initialized with weights of 1.0 assigned to each of the seven elements, thus requiring a positive action on the part of the selection board to modify the criteria. In other words, all type commands (ship, air, staff, and shore) would have a weight of 1.0, unless the board decided specific types should have a higher relative weight than others. In the case of particular commands, the selection board could assign the Navy Department commands a relative weight of 1.1 to denote their importance or challenge. This multiplication factor will then be applied to each officer's Common Fitness Report Multiple where a Navy Department command code is indicated. The determination of the Officer's Final Weighted Multiple, OFWM, for each officer in the selection zone completes the first part of the second operational phase, the selection criteria.

The final operation of the computerized system deals with sorting the information into logical files for the selection board. This add-on operation can be simplified by producing a single collated list of officers in the selection zone, listed in descending order in accordance with their Officer's Final Weighted Multiple. However, by injecting the maximum number of officers that can be selected, as provided by the Secretary of the Navy and the Bureau of Naval Personnel, and inserting simple sorting instructions, the computer system can provide additional assistance to the board.

Current selection boards provide multiple reviews of those officers' records just above and below the selection-passover line. In addition, selection boards are charged with recommending officers within the zone for noncontinuance whose records indicate their performance is substandard. To aid in the accomplishment of these functions, the sorting direction shown in figure 11 provides a guideline of departure for selection boards. These directions provide for a percentile division of the selected and the passed-over officers within the zone, three divisions in the selected area and four divisions in the passed-over area. The lowest 5 percent in the selected area and the top 5 percent in the passed-over area, lists C and W, are sorted to provide records to be reviewed by the selection board to ensure that the division between officers selected and passed over is correct. Lists B and X are provided in the event the

Select			Pass-over		
List		Percent	List		Percent
A	Top	85	W	Top	05
B	Next	10	X	Next	10
C	Next	05	Y	Next	80
			Z	Bottom	05

Fig. 11—Sample Selection Board Sorting Instructions

selection board wishes to expand this review. List A contains the names of those officers whose selection is uncontested. Lists Y and Z lists those officers passed over. List Z is sorted to provide the selection board with the names of officers whose records should be reviewed to ascertain their fitness to continue on active duty. Upon completion of the various reviews by the selection board, officers' names can be incorporated into the final two lists, selection and noncontinuance.

In summary, the seven major steps contained in the selection board operational phases of this automated system are:

1. Determine Selection Zone Average Multiple.
2. Adjust all officers' multiples to the Common Fitness Report Multiple using the Selection Zone Average Multiple.
3. Introduce the selection board criteria and weights.
4. Calculate each officer's Final Weighted Multiple.
5. Correlate all officers' Final Weighted Multiples in ascending order.
6. Introduce selection board sorting instructions.
7. Print the Selection List and the Noncontinuance List.

The redesigned fitness report together with the computerization of the data results in a synergistic effect that enhances the overall system. The report is more readily prepared and understood by the reporting senior. It is also more readily introduced into the computer. The computer not only provides a faster means of correlating the data, but provides a powerful tool to the selection board. The overall system, as well as the facets within it, is flexible. Expansion and contraction of the system is possible; augmentation of the system with other systems is possible; and use of the system to serve other selection purposes is possible.

III

Conclusions. Close examination of the present operation of the selection and promotion of naval officers reveals several weaknesses. These can be summarized as follows:

- Skewed grading distribution (vice the normal curve)
- Junior officer-senior officer comparison
- Disparity between judges (high and low graders)
- Inability to apply selection ground rules equitably
- Voluminous data to correlate

Implementation of the computerized system proposed, together with the proposed revision to the report of fitness, can nullify or reduce appreciably these five major weaknesses of the selection process.

The revision of the report of fitness in the evaluation grading area will reduce appreciably the inequities and misunderstandings caused by the grading descriptions presently used. These descriptions, together with the inappropriate reliance on the normal curve, would be replaced by the selection percentile grading incorporated in the proposed format. This same formating should influence the reporting seniors to base their grades on the officer's present rank and potential for

the next higher rank, rather than compare him to other officers possibly more senior. Thus the change in the working and layout of the evaluation section of the redesigned report offsets the first two weaknesses of the present system.

The third weakness of the system, disparity between judges, is corrected in the computerized system in steps. First, the system relates the officer's grade to the reporting senior's past history of grades assigned to officers of the same rank. This not only provides a comparison grade for the officer being judged, but also establishes the reporting senior's average grade for each rank level. Using the reporting senior's average grades, a norm can be established within a particular zone, thereby providing the necessary leveler to all the graders from the most lenient to the harshest judge.

The fourth weakness revolving around the inability of the present system to apply selection ground rules equitably is easily conquered through the use of the computer. The reduction of the 28 grading categories and five control areas of today's fitness report to nine elements on the briefing sheet still produces a sizable task. These nine elements must be multiplied by the number of fitness reports each officer has in his file. With an average of 24 reports for lieutenants under consideration for lieutenant commander selection, the application of selection ground rules would have to consider over 200 elements in the summary records of each officer, or over 750 elements in his fitness report files. Through a simple computer program, the system proposed can apply the selection board ground rules equitably over the entire spectrum of reports. This operation is accomplished easily through the assignment of weights to the ground rules to be used as multiples where appropriate.

The last major weakness of the present selection system, like the fourth weakness, is easily overcome by using a computer system. Using the example of the lieutenant commander selection with the number of selection elements varying from 200 to 750 for each officer in the zone and considering that approximately 2,500 officers are in the average zone, a minimum of about 500,000 selection elements must be reviewed. This poses a difficult task for a board of nine officers, not only to review, but to correlate. Handling voluminous data is the "bread and butter" of a computer. Through the introduction of the selection board's instructions into the computer, it is capable of providing the information in the form desired. Depending on the computer system and equipment employed, the information can be presented in a variety of forms, including the cathode-ray tube, paper printouts, and punchcards. Use of the on-line cathode-ray tube equipment in the computerized system could eliminate the necessity of the selection board physically handling any of the records or information relative to the selection. However, it is visualized that the final selection and noncontinuance listings would be paper printouts for the board's signature.

By itself the system offers additional advantages with minimum effort. Officers with particular backgrounds or experiences can be quickly and easily located to fill specific billets. This can be accomplished by using the code numbers representing the background billets desired, as obtained from the *Manual of Navy Officers Classification*. If a certain level of performance is desired in these background billets, introduction of the lowest evaluation multiple acceptable can provide a sorting medium.

Statistical data can also be obtained from the selection and promotion files. Data such as the number of officers serving in a particular billet during a particular period of time can be summarized. How many officers are

assigned to a particular command, their names, their designators are also available in the system. This latter type of information makes up the major portion of the Navy's current Officer Distribution Control Report.

One other drawback of the present fitness report system is that the officer concerned usually does not see his evaluation unless he makes a trip to the Officers Record Review Room located in Washington, D.C. Thus many years may elapse without the officer knowing his strengths and weaknesses. This can be equated to a student attending college without receiving the graded results of any tests until 4 years elapse, and only then be informed he has been selected for graduation or passed over. The proposed system is capable of producing periodically, with little effort, a computer printout report summarizing the officer's evaluation multiples, similar to the briefing sheets portrayed in Captain Scanland's article. This report can be forwarded to the individual officer for both information and validation.

All these additional advantages can be obtained with minor programing changes, without disturbing the integrity of the selection and promotion files. Administrative operations can be introduced into the computer to ensure the completeness of the files, that there are no lapses of evaluation coverage for any officer. Any lapse uncovered could automatically result in the computer preparation of a form letter to the command or reporting senior concerned.

Innumerable side benefits can be achieved with the computerized selection and promotion system proposed; however, its prime objective is to overcome the weaknesses inherent in the present manual-clerical system now in use. The proposed system can achieve this objective. Its integrity is not suspect. It is capable under the guidance of the selection board to select the best fitted and most qualified naval officers for promotion.

BIOGRAPHIC SUMMARY

Capt. George H. Lewis, U.S. Navy, earned his bachelor's degree from The George Washington University and holds a master's degree in computer science from American University. His early career was spent in patrol craft and minesweepers, and he later served as Commanding Officer of the U.S.S. *Norton Sound* (AVM 1) and of the U.S.S. *Burton Island* (AGB 1). Captain Lewis has had duty with the Joint Chiefs of Staff and is currently Director of Management Information/Data Systems Division of the Naval Ordnance Systems Command.

FOOTNOTES

1. Fitzhugh Lee, "Selection for Promotion," *Line Officer Personnel Newsletter,* March 1963, p. 4.
2. Worth Scanland, "Standby . . . Vote," *United States Naval Institute Proceedings,* June 1963, p. 44.
3. Bureau of Naval Personnel, "Promotion of Officers in the Navy," *Naval Training Bulletin,* January 1956, p. 6.
4. Bureau of Naval Personnel, "Fitness Reports," *Line Officer Personnel Newsletter,* January 1962, p. 13.
5. R.H. Gregory and R.L. Van Horn, *Automatic Data-Processing Systems,* 2d ed. (Belmont, Calif.: Wadsworth), p. 556.
6. "Officer Effectiveness, Performance and Training Reports," *Air Force Manual,* 6 April 1964.
7. *Report on the Fitness of Officers.*

Faced with uncertainties about the nature of future conflicts at sea as well as continuing economic constrictions on the size of U.S. defense expenditures, the Navy finds itself in the difficult position of having to maintain today's combat-ready forces while trying to develop and acquire new weapons systems. By designing a new ship type adaptable enough to serve a wide variety of functions in both peace and war, the Navy would not only gain needed flexibility but new savings could be realized as well. The concept of the air capable ship potentially can make significant contributions to enhancing America's continuing role as a maritime power. (The opinions in this article are those of the authors and do not necessarily reflect those of the Naval Air Systems Command.)

A FLEXIBLE SHIP AND A MORE RESPONSIVE NAVY

An article
prepared by
F.W.S. Locke, Jr., and Virginia Withington

Introduction. Withdrawal from Vietnam will urge an exhaustive reconsideration of priorities both in the United States as a whole and within the Navy Establishment. Many changes in the allocation of national resources can be expected, and if the international climate appears comparatively benign, the proportion of the budget allotted to the military will be sharply reduced.

It is not too early for the Navy to be examining its future in the light of the impending reductions, for "nothing, it seems is quite as effective as a sharply reduced budget to force an organization to reveal its true priorities,"[1] and it is possible that a sizable effort will be needed to induce the Nation to maintain a Navy in times of low tension. A major consideration will be how to maintain readiness, to insure the ability to meet any future emergencies, to take continuing advantage of the growth of technology, and to persuade the Nation that these matters are of importance to the realization of national policy.

It is the intention of this paper to propose means whereby the Navy can maintain a high degree of training, develop a pool of vessels and aircraft capable of fast conversion to unforeseen military duties, and perform a variety of tasks that have broad applications in the international political arena.

The Navy and the Nation. In the current period of economic difficulties and with U.S. participation in the Vietnam war sharply reduced, the U.S. Navy confronts the type of dilemma it faced

during the twenties and thirties: within a circumscribed budget, it must on the one hand, maintain itself in a healthy state of readiness for any eventuality, and on the other, it must develop and acquire new combat systems, both ships and aircraft, for future conflicts. And it must do this at a time when the competition for national resources will be extremely keen.

There is a major responsibility for the military and Congress to maintain communications: the military must persuade the Nation that it is preparing for *future* eventualities and is not–as is often unfortunately apparent–making ready to refight the last war; and the Congress must formulate its changing policies with due reference to their implementation, making sure that the military arm is instructed as to its duties in relation to these policies. Recent history of U.S. policy certainly shows the benefit of flexibility in military planning.

The Navy has a unique responsibility among the services to maintain a diversified capability, since a Navy can be equally useful to a nation in peace and war. As Mahan says in his seminal work: "Naval strategy has indeed for its end to found, support and increase as well in peace as in war the Sea Power of a country." And he quotes "a recent French author" as saying that naval strategy differs from military strategy in that the former is much broader and is as vital in peace as in war.[2] While these early writers probably meant that a maritime nation must at all times be alert to the need for well-spaced coaling stations and strategically located overseas bases, one can also infer that a properly employed Navy may also represent a nation overseas in friendship.

The proper design of naval forces implies providing for a range of vessels useful in a wide variety of situations. For example, a CVA task group is too costly and warlike to be used in short-of-war confrontations;* smaller, less obviously aggressive forces should be available for less dangerous situations. The ideal Navy is prepared for a wide range of peaceful errands–showing the flag, enforcement of international agreements, prevention of piracy, assistance in navigation on the high seas–escalating to full battle posture when called upon. This is a radical idea in the context of the post-World War II Navy. The current Navy consists of groups of highly specialized warlike vessels, all very costly and incapable of being modified for other tasks without extremely expensive yard periods, and few officers can conceive of any other composition of forces. As a radical idea, the flexible Navy will be difficult to introduce, and possibly even more difficult to set in motion promptly through the layers of the entrenched establishment of the Department of Defense.

Many years ago Jane pointed out "the conservatism so inherent with nautical men who as a class are averse to going either forward or backward."[3] Not only is there continuing conservatism, but there apparently also exists the classic lack of communication between the technical and operational officers which further inhibits change. Vice Adm. H.G. Bowen, Sr., in his lively description of his efforts to improve destroyers in the thirties, tells of his exasperation when operational officers made technical as well as operational decisions, with no knowledge of the technical facts and possibilities.[4] Today the technical man must usually await the writing of "requirements" before he is allowed to spend money on new devices that might well influence the content of these same requirements, and he is seldom, if ever, consulted in the

*The CVA and embarked aircraft cost approximately $1 billion, plus escort vessels (total personnel about 6,000). This investment makes it extremely difficult to justify using a CVA task group for anything but warlike action at a high level.

preparation of basic policy. The system tends to inhibit the adaptation of technology and appears to perpetuate the conservative outlook.*

Potential International Situations. It is, of course, impossible to predict accurately the comparative political and technical strengths of the United States and the other nations of the world for more than a few months ahead. The only way to manage such projections is to postulate wide-ranging assumptions and then assess the role of the Navy under the assumed circumstances. Yet, regardless of the general nature of future world politics, some conflict must be anticipated, and therefore a surface Navy capable of rapid response to varying degrees of provocation must be continued. In fact, the major threat to our free use of the seas will be the submarine which can launch both underwater and airborne weapons. No very effective countermeasure has yet been developed, and no breakthrough in underwater sensing can be foreseen. Thus the Navy of the future, no matter what the scenario, must be capable of the best available antisubmarine and antiaircraft warfare.

Since it is clearly impossible to predict accurately the alignments and animosities of 10 years from now, the only useful attitude to take is one of preparing for almost anything. It is probable, however, that some combination of "withdrawal," "cooperation," and "conflict" will characterize U.S. politico-military posture to the end of the century and that the role of the United States at sea will be increasingly various. Its tasks will be military: antisubmarine and antiair warfare, mine countermeasure, amphibious assault, attack, and protection of shipping; paramilitary: protection of trade routes, enforcement of international agreements on the high seas; and peaceful: protection of trade routes, rescue and relief, establishment of navigation systems at sea, transportation, and pollution control.*

Mobile Support System (MSS) the Air Capable Ship (ACS).** To meet the requirements of flexibility for the future within the parameters of reduced expenditures for defense, Navy planners would be well advised to recognize the potential significance of what we shall refer to as the MSS/ACS concept. Initially the flexible ship was studied in NAVAIR with a view to supplying an inexpensive and effective escort, primarily in antisubmarine warfare. The resulting vessel was called a mobile support system to emphasize its basically passive role. The use of helicopters and other VTOL for primary weapon systems allows for the use of a small, simple carrier, since VTOL do not need catapults or arresting gear and require only a pad from which to operate. The

*Col. Raymond C. Shreckengost, USMCR, in an article on "Technology and the Establishment," *Naval War College Review*, March 1972, p. 16-32, points out that technological advances, by challenging organizational status quo, represent a threat to the "Establishment" and thereby can be expected to be resisted strenuously.

*While much of this peacetime activity may fall to the Navy, it is realized that the U.S. Coast Guard, now performing many such tasks in local waters, could well expand its scope, given the proper vessels and aircraft and the encouragement of the Congress. To the extent that Navy vessels are appropriate, the Coast Guard has employed them; thus, to the extent that the flexible vessel to be discussed herein will be appropriate, the Coast Guard should make use of it. Therefore, the function alone will be discussed without reference to whether the actor is the Navy or Coast Guard.

**The designation "air capable ship" (ACS), first employed in NSSM 50, is used herein in preference to the later term "sea control ship," since the latter is in the system, having graduated from the conceptual stage. An ACS might very well become a sea control ship.

flexibility of the concept is based upon the judicious use of containerization. For example, housing, maintenance, parts stowage, squadron offices and ready rooms, and even the aircrew personnel berthing, galley, and other hotel functions could be accommodated aboard the MSS/ACS in the form of standard containers. This technique was first successfully demonstrated in part aboard *Wasp* in late 1971, when the maintenance shops, spares, and files for Helicopter Squadron 5 were housed in 8 by 8 by 20 foot containers in Hangar Bay 3 for a 2-week deployment.[5] Very possibly the containerized operation could be used on the beach as well as at sea—with the multiple advantages of simplifying deployment, reducing dependence on fixed installations ashore, and keeping all squadron property and files in one organizational array regardless of its general location.

Part of the rationale for keeping the ship small is cost reduction, and, in furtherance of this desideratum, crew tasks must be kept manageable by automating as many functions as will profitably serve to limit the number of officers and men needed. It is estimated that the ship, whose sole function is supporting aircraft, could be operated by 62 officers and men. All aircraft operating personnel would be supplied by the squadron.

As an ASW base, the mobile support system ship (figure 1) could keep two SH-3 helicopters airborne continuously while it steamed 8,600 nautical miles at 20 knots (nearly 18 days). In a strike role the ship could mount 350 sorties with 10 AV-8A Harriers during about 10 days before the magazines would need to be replenished. This could be accomplished by a ship estimated by knowledgeable people to displace from 6,400 to 7,800 tons. Six thousand five hundred tons was taken as a design goal for discussion purposes.

Removal of the aircraft and the maintenance containers on the hangar deck makes the ship into a roll-on/roll-off ship without further conversion. There is space for fifty 10-ton trucks and room below for the drivers and auxiliary personnel. Since these living quarters below the hangar deck are containers, they can be readily removed

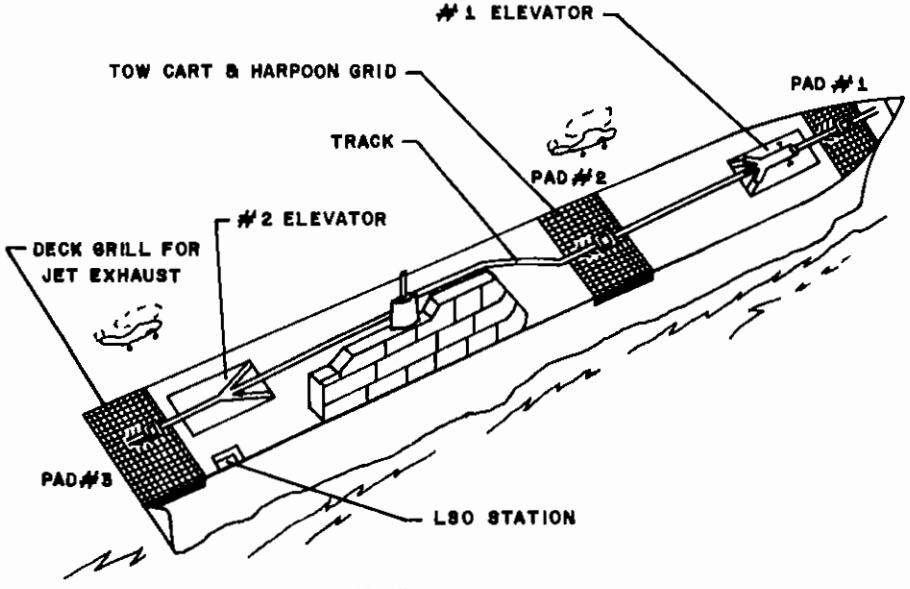


Fig. 1—Mobile Support System Ship

—converting the ship into a logistics transport capable of being loaded with 387 standard 8 by 8 by 20 foot containers, by increasing its displacement to 9,500 tons.

Reduction of ship's crew can be achieved by automating many crew functions. In the field of command and control, for example, the bridge could be designed to resemble the cockpit of an aircraft such as the P-3, with ship control, navigation, engine, and tactical displays arranged conveniently for the captain and an assistant. A direct view of the flight deck and closed circuit TV displays of blind areas and certain critical portions of the ship, such as the elevators, would keep the captain informed of the ship situation with a minimum of oral communication. The navigator and engine controller would be similarly situated behind the bridge with the displays and controls of their particular functions in a convenient arrangement. The engine controller would be assisted by four men whose function would be maintenance of the propulsion machinery and power sources.

The air controller, on the inboard side of the island, would have a bay window through which he could see the entire flight deck with its three pads and two elevators. Three sets of lights under his control would direct landing and takeoff. The harpoon grill securing aircraft to the ship is mounted on a cart which, in turn, can be attached to a cable through a slot in the deck by which the aircraft can be moved on the command of the air controller to the selected elevator without the need for deck crew. Using closed circuit TV for information from the hangar deck, the air controller can also control the elevators themselves. With proper automation and displays, it is hard to see why this job would need assistants, particularly in view of the much more leisurely operation of the VTOL launch and retrieve. When the ship does not have to turn into the wind for air operations, launch and recovery cycles can be arranged for the convenience of the crew, except for tactical situations calling for a multiple launch in an emergency. A shelter at the flight deck level should be available for the landing signal officer (LSO) and crash crew and any special service equipment needed at this level of the ship.

The combat information center aft of the air controller would need ready access to the bridge. An overall situation board could be monitored by TV camera for remote display. Both air controller and CIC officer would be linked by radio to the aircraft. In the event of need for special mission electronics for analysis and communication, as in the ASW mission, a van containing these services could be secured to the deck aft of the island or on the hangar deck under the island with suitable interconnections to the CIC and bridge.

The current crop of VTOL aircraft which might operate off this ship would be the Sikorsky SH-3 and the Hawker Siddeley "Harrier." These aircraft are in the 20,000-pound class, and their design sinking speeds are about 12 feet/second. The vertical motion of the deck is a function of sea state, and the acceptable vertical motion cannot be accurately determined at this time. However, if a maximum of 5 feet per second is permissible, then the forward pad would be usable in sea state 5. Studies indicate future VTOL ASW, fighter, and attack aircraft may be somewhat over 30,000 pounds. In physical size these aircraft may be somewhat larger than the Douglas A-4. The indications are that local deck temperatures could exceed 1000^{0}F. from advanced jet lift engines or deflected thrust engines. The three landing pads should be in the form of grills to carry the fast-moving hot gasses overboard. Sufficient design and research has been done on these grills by the British and the U.S. Army to ensure an acceptable design.

The hangar deck would be bare of shops and storage spaces as far as the ship is concerned. Instead, the ship would supply plug-in connections for light, power, and communications to standard 8 by 8 by 20 shipping containers. These containers would belong to the embarked aircraft squadron. The various maintenance shops would be permanently set up in the containers. The ship's complement of aircraft could be all kept on the hangar deck, and the number of aircraft carried would be such that any one aircraft could be moved to the flight deck without too much trouble. The aircraft could be launched and retrieved with the aid of the French "Harpoon" recovery system, and the general arrangement of the flight deck would be as shown in figure 1.

By initial estimates it appears that the ACS could be operated as an escort or strike vessel by 62 officers and men. It may be that the accommodations for these people, essential to almost any role of the ship, would be most economically included in the ship "weight empty," to use an aircraft term. That is, the accommodations for the ship's crew could be built in, on the grounds that under almost any circumstances these facilities would be required.

An aircraft squadron of 13 SH-3 helicopters currently requires about 36 officers and 180 men. The number of pilots and flight crews will most likely be increased in the future as the aircraft functions multiply, but the number of men in the ground crew may be susceptible to reduction to about a half of the present requirement. This will require the design of aircraft with a particular objective of reducing maintenance problems. Until this is accomplished, the first generation ship would need about 220 spaces for the aircrew which can be supplied in standard containers in a compartment below the hangar deck where there is space for 108 containers in two layers, or 17,280 square feet of floor space.

The two main propulsion GE LM-1500 gas turbines would be located in one engineroom. It may be desirable to consider a twin-screw installation. In any case, the propellers probably should be controllable and reversible in pitch for two reasons–setting the pitch for best efficiency as a function speed would reduce fuel consumption and noise, and incorporating reverse pitch would ease gearbox problems. Adjacent and using the same intake and exhaust–up through the island–would be another gas turbine for driving the electrical power system.

Estimating the cost of this ship is fraught with difficulties. One estimate was made considering the ship to be a warship, and the price tag came out to be $60 million. On the other hand, if it is considered to be a piece of mobile support equipment and not a warship, the price is quite different. The authors' estimate of the ship in its MSS configuration is $11.3 million as broken down in figure 2. The Naval Air Development Center, using a Rand study, estimated the cost of two families of commercial cargo ships and naval vessels without electronics for fire control or command control. These results are shown as straight lines in figure 3. In addition, a curved line shows the cost of some small carriers as estimated by Naval Ship Engineering Center (NAVSEC) which would be built to full Navy specifications. The price of the Lykes Seabee is

MOBILE SUPPORT EQUIPMENT SHIP

Cost Breakdown

Hull	2.6 M$
Propulsion (Two LM1500)	4.0
Electric Plan (2500KVA)	0.5
Auxiliaries	2.1
Command & Control (P3B Suit)	0.6
Outfit	0.5
Design	1.0
Total	11.3 M$

Figure 2

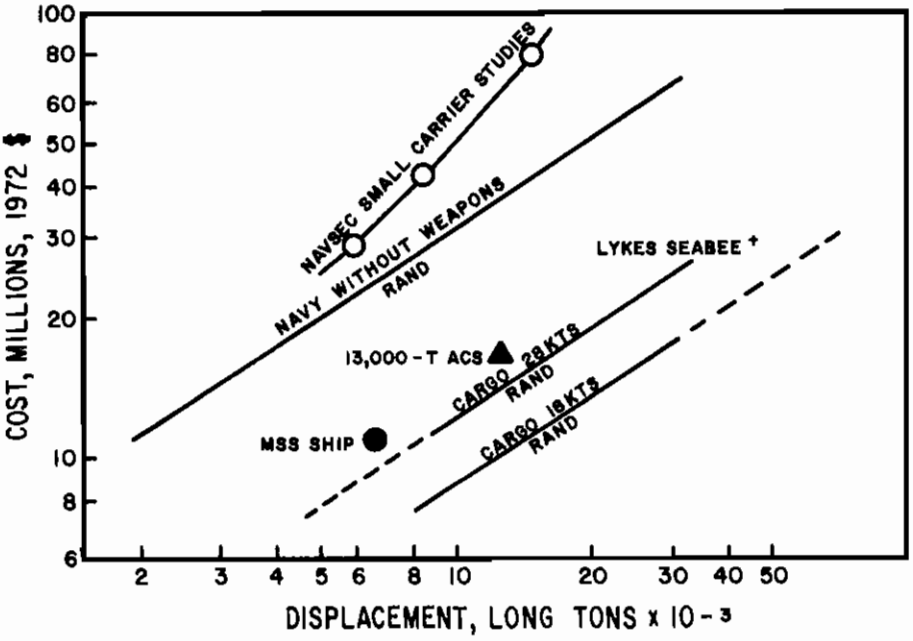


Fig. 3—Ship's Costs

shown as lying above the Rand 18-knot cargo ship line though it is not a fast ship. This vessel has an elevator with a capacity of 2,000 tons that can lift two fully loaded barges and deposit them on any one of three decks. The decks have tracks and mechanisms to move the barge to its proper position in the ship. It is therefore a fairly complicated and relatively slow ship. In order to accept the MSS cost estimate, there is one serious proviso that needs to be accepted first; that is, that the ship be built to cargo ship standards. This means it is to be built to American Bureau of Shipping rules and not Navy specifications.[6]

Roles and Missions of the ACS. As it was first conceived by NAVAIR, the missions of the MSS were solely those of escort and strike. However, a greater measure of economy and flexibility would be achieved if the new ship were designed from a broader perspective than was the case with the MSS. Using individualized equipment packages as enclosed in easily transferable containers, this new ship which we shall refer to as an air capable ship (ACS) would be able to perform those missions originally assigned the MSS in the NAVAIR study as well as being readily convertible to other configurations useful in performing vital peacetime roles. Any VTOL aircraft discussed in this portion of the study will be those that are sufficiently operationally proven to keep the concept in the "low risk" area.

However, if the ACS concept provides the proper impetus, it could ultimately provide the support for almost any naval capability and encourage an active VTOL development, and as the capabilities of the embarked aircraft are improved, it may be necessary to improve certain aspects of the ship's performance. For example, when VTOL aircraft become capable of escorting very high value targets, the ship may need a higher speed to keep up with the force. (Merchant ships are being built today with higher speeds than formerly —up to 33 knots—implying the necessity that the ACS must be able to do the same.)

There is a group of functions, best performed by a trained and disciplined force like the Navy, which will need to be done whether or not there exist international agreements administered by international bodies of adequate strength. Defense of merchant ships against piracy, patrol of trade routes, rescue on the high seas, protection of oil wells and undersea mining, protection and conservation of fisheries—all these necessary tasks can be performed by ship-based helicopters with suitable sensors and weaponry. Most applicable equipment is already in existence and needs only to be adapted for airborne use.

There are several advantages in demonstrating peaceful capabilities of the ACS: First, the Congress may be more eager to support building a fleet in peacetime if it is shown that this fleet will be useful in all geopolitical climates. Second, the Nation will have at its disposal at all times the tools for dealing internationally on and from the ocean, whether in anger or in friendship. Third, the more ships of a given type that are built, the lower the individual cost, further increasing the numbers that can be available to the Navy. Fourth, a higher degree of readiness can be maintained if men are continuously exercising ships and aircraft in real tasks, forcing ships' crews and aviators to be proficient in their skills. Finally, continued development of aircraft, the equipment for handling them on board the ship, and navigation and low-visibility flight instrumentation will be encouraged by demonstrating a continuing need.

The usefulness of the ACS in peacetime, whether operated by the Coast Guard, by civilian operators, or by the Navy itself will be determined by careful planning to select a size, speed, and general arrangement that will prove most adaptable. To indicate possible approaches to this planning problem, a few missions have been selected for discussion and preliminary analysis. Wherever possible, the peacetime function has been related to a comparable military one in the hope that by this means it will be easier to keep from compromising military capability in the effort to achieve adaptability.

Conservation, Navigation, and Pollution Control. It is not necessarily true that the absence of war will necessarily lead to any significant improvement in international cooperation. However, it is reasonable to believe that some degree of international agreement will be reached concerning the uses of the high seas, particularly since efforts in that direction are already underway in the United Nations. The United States is, in fact, engaged in attempting to draft such agreements in the U.N. Committee on the Peaceful Uses of the Sea Bed and Ocean Floor.[7]

Clearly, the adoption of any such agreements will call for the establishment of machinery for their enforcement, both by the individual coastal nations and by the international body. The U.S. Coast Guard, for example, will probably find its sphere of action considerably expanded. The ACS with helicopters equipped for surface surveillance and even with weapons to enforce obedience to international law would provide a much needed capability in this area of enforcement.

Growing interest in preventing ocean pollution is coupled with increased hazards associated with undersea oil wells and the stranding or collision of huge tankers. Prevention of this latter danger will require the development of new navigation and control systems. The draft of new tankers is up to 100 feet, and their ability to avoid trouble is minimal. For example, a crash stop by the 200,000-ton *Idemitsu Maru* (a comparatively modest-sized tanker) takes 21 minutes and 2.5 miles, during which the ship is essentially out of control.[8] There are very few ports in the world that can

accommodate these tankers, but in many areas they may approach shore to offload into smaller ships. In the continental shelves around the world there are many underwater peaks and shallows that have been safely ignored to date because the draft of even the largest ships hitherto has been small enough to render them invulnerable. It will shortly become desirable to resurvey vital straits and continental shelf areas, to develop means for marking hazards on the "high seas" in some manner that calls the attention of the most heedless crew, and, in extremely tight cases, to introduce "positive control" by which an external observer with suitable sensors cons the ship.[9] The ACS could act simultaneously as a survey vessel, a deep-sea buoy tender and as the controller.

There are no particular configurational demands on the ship for these purposes: Installation of a winch and suitable construction of the overhead rail on the hangar deck would ease buoy handling through the door already recommended for possible roll-on/roll-off operation. The provision of a van with communications and a situation board for positive control by the ship, acting through an airborne radar system, is entirely feasible, requires little development, and is comparatively inexpensive.

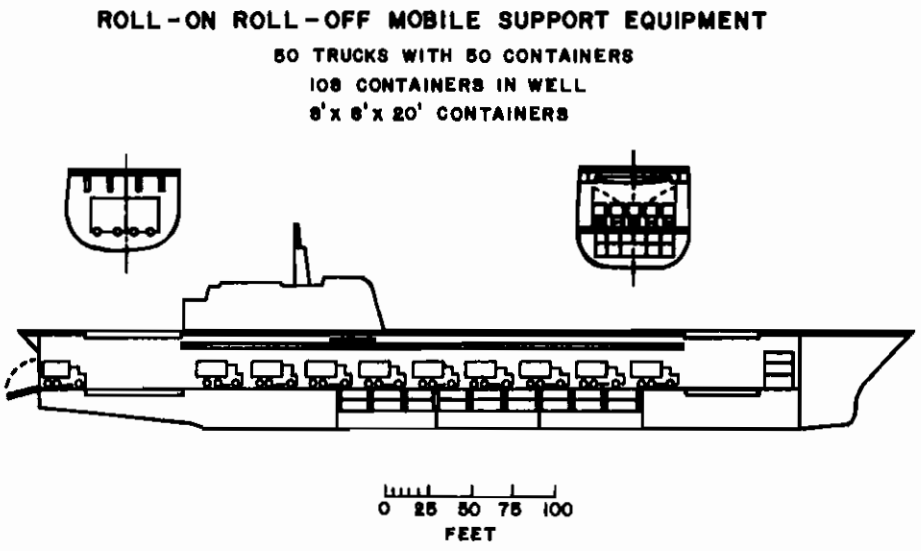
Transportation, Logistics, and Cargo. As illustrated in figure 4, an MSS/ACS type ship would be highly adaptable for use as a carrier of logistic supply containers. The same type of employment in peace would require that the ship be capable of carrying goods at a *profit*.

In altering the originally proposed MSS in order to give it a true dual purpose role, three primary compromises are needed. First, the elevators should be designed for a 100-ton capacity rather than 20 tons if only aircraft were handled. Second, the overhead crane should probably also be capable of lifting 100 tons instead of 20 tons. This looks as if it might make it both heavy and expensive, so for want of a better number, initial design should consider 50 tons for this item. Third, a portion of the hangar deck needs to be hinged. There are a couple of other minor changes that might have to be done, such as heavier tow cables in the slots in the hangar deck. None of the compromises seem very serious if they are incorporated in the early stages of preliminary design and should not really affect the cost or performance of the ship.

In the logistics configuration, the MSS ship should require a crew of 30 officers and men, and the maximum feasible payload is 3,800 tons of containers. It is likely that the usual payload of containers will be somewhat less than that because of loading considerations and average container weight. The question remains as to the desirability of the mission—whether this ship would be sufficiently profitable. Many interrelated factors contribute to profitable operation—speed, turnaround time, length of voyage, crew size and required skills, fuel consumption, and cargo capacity, among others—but, all other things being equal, size is of paramount importance. Studies reveal that cost reduces as size increases, but not linearly; the rate of improvement falls off at between 500 and 700 containers per ship.

Enlarging the ACS to a larger capacity would not be expensive as space in surface ships is relatively cheap. Figure 3 shows that ship acquisition costs increase very slowly with size. As an example, it is assumed that a simple ratio exists between ship capacity and its displacement; in that case, an ACS capable of carrying 750 containers will be about twice the size of the 6,500-ton MSS and cost well under $20 million.

It might, therefore, well be advisable to consider an air capable ship somewhat larger than that initially proposed


ROLL-ON ROLL-OFF MOBILE SUPPORT EQUIPMENT
50 TRUCKS WITH 50 CONTAINERS
108 CONTAINERS IN WELL
8'x 8'x 20' CONTAINERS
0 25 50 75 100
FEET

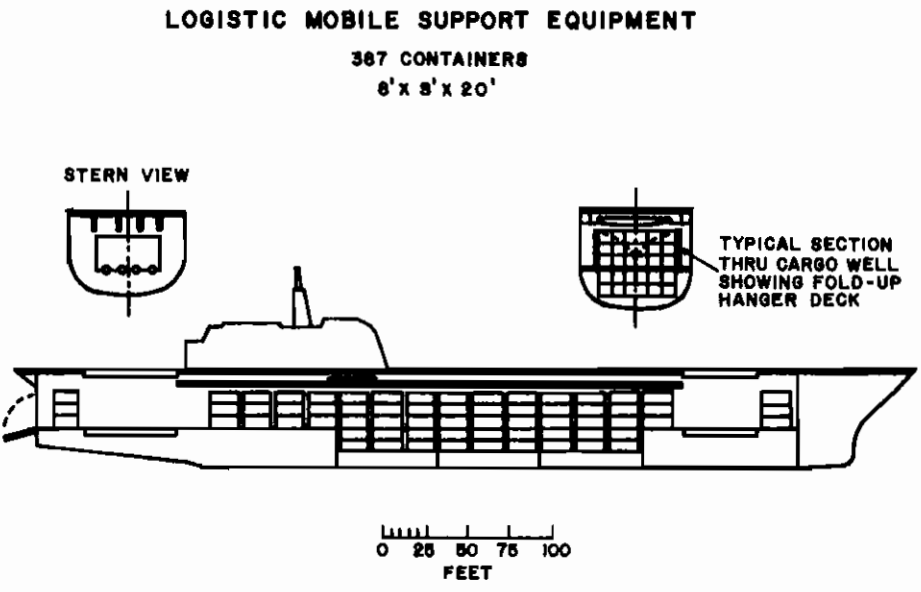

LOGISTIC MOBILE SUPPORT EQUIPMENT
367 CONTAINERS
8'x 8'x 20'
STERN VIEW
TYPICAL SECTION
THRU CARGO WELL
SHOWING FOLD-UP
HANGER DECK
0 25 50 75 100
FEET

Figure 4

in the interests of a more universal and profitable application. Little disadvantage to the original concept will result if the growth is not excessive; there may, in fact, be some advantages accruing from the increased space available for habitation and supplies and, in the opportunity for using a longer ship, a higher fineness ratio, and a higher speed for the same power.

The Hospital Ship. The ability to take medical/surgical facilities to sea is one of great utility in war or peace, but at this date the U.S. Navy has neither a hospital ship nor adequate facilities aboard other vessels. The potential of the ACS in this regard is considerable.

The medical mission to be examined is that of caring for the wounded in amphibious operations during the first month after D-day, until an airport and shoreside field facilities can be made available. This requires a special hospital with major emphasis on the surgical care of serious wounds; if such a hospital can be supported aboard the ACS, other hospital equipment intended for the care of civilian casualties after flood or earthquake can also be accommodated. Quite precise space estimates for the Navy hospital ship can be made, since the Bureau of Medicine and Surgery has recently completed studies of mobile medical facilities in cooperation with the Marine Corps. The figures used below were obtained in discussions at BuMed and should not be considered officially to represent the Bureau's requirement. They are entirely the responsibility of the author with suitable references provided.[10]

The unit to be supported is a double 60 surgical bed hospital, entirely housed in 8 by 8 by 20 foot containers or some multiple that involves combining two or more units. The practicability of such modularization of medical/surgical facilities has been demonstrated in part by Army and Marine Corps field hospitals, and, as previously noted, the use of inhabited containers aboard ship was recently proven aboard *Wasp*. An estimate of hospital space required for equipment alone is approximately 19,700 square feet.

It must be assumed that the rescue helicopters will need space for maintenance and spares and one helicopter on the hangar deck. This, together with the after elevator, may require as much as 150 feet of the after portion of the hangar deck, leaving only about 18,000 square feet for the hospital—inadequate for this mission.

Again, a ship larger than the original 6,500-ton MSS option will be needed. Looking at the ship selected for cargo transportation at about 13,000 tons, we find that the dimensions of its hangar deck would measure 500 by 70 square feet. Since its beam is wider than that of the original proposed ship, only about 70 feet or so of the afterdeck will be needed for helicopter maintenance and the elevator, leaving about 30,000 square feet for the hospital. Since the overhead is about 25 feet high, it is entirely possible for an overhead rail and crane to stack those vans used for storage or laboratory work, involving able-bodied personnel, on top of the containers on deck. Standard containers are more than able to support the load, and catwalks and ladders can easily be rigged.

The complexities of patient flow and sterilization requirements may also increase the use of deck space beyond what meets the eye; passageways and the need of some vans to be interconnected by sterile passageways will consume much valuable deck space. This hospital will be staffed by 26 officers—doctors and nurses—and about 135 enlisted men, a number that should provide no particular support problem. Galleys on the hangar deck will be largely for the serving of patients and for the use of staff for quick lunches during a busy period. BuMed has experimented with "convenience foods,"

those prepared and frozen, requiring only to be melted in infrared ovens, and has found enthusiastic acceptance. Requirements for cooks and stewards are thus kept to a minimum, reducing the need for nonmedical personnel.

It seems quite clear that a useful hospital ship version of the ACS could be made if the basic ship is in the 13,000-ton class. Peacetime uses of such a ship would require modification of the type and arrangement of the hospital vans, since the medical care required by sufferers from earthquake, flood, or famine is different from that called for by battle casualties. Provision of vans suitable for the various special functions should be quite straightforward and feasible. The major advantage of this configuration versus a "built-in" hospital is precisely its flexibility. The nature, situation, and degree of any great disaster cannot be foretold. For just this reason, a rapid means for placing the required equipment aboard to fit the situation is most desirable. One or more properly fitted ships can be readied and underway within a very few days after being alerted. Finally, since medical/surgical techniques and equipment are constantly being improved, replacement of obsolete gear is desirable. This can be accomplished easily in a container configuration.

Mine Countermeasures. Like the naval surgeons, the mine countermeasures forces are currently in want of a ship. Their requirements include the provision of space for RH-53 helicopters and associated maintenance facilities, together with the mine countermeasures gear with its maintenance facilities. Somewhat arbitrarily, a force of 16 helicopters has been selected for examination. Numbers and space requirements have been taken from a recent study prepared for NAVAIR which examines the modification of the LPH for the mine countermeasures (MCM) task.[11] Some figures have had to be estimated since there are spaces already available aboard the LPH, and translating these into terms of empty deck is not entirely straightforward.

To begin with, the flight deck launching and landing pads must accommodate a helicopter with a 72-foot rotor diameter, about 89 feet long, somewhat larger than the vehicles we have been discussing so far. Folded, this same machine measures 56.5 feet by 15.5 by 17 feet high. When these vehicles are on the hangar deck, space around them must be left open for passage and for introduction of work carts with tools and spare parts. An overall space of about 19,000 square feet for the 16 helicopters is assumed to be adequate.

The largest MCM gear is supported on a sea sled 36 by 13 by 14 feet high. Storage area for 10 of these, spaced for easy access, will be about 6,000 square feet. Other large gear, such as underwater fish and cutters and paravanes can be placed in standard vans. About 10 will be necessary, occupying roughly 2,000 square feet. In addition, 30 maintenance vans for helicopters and MCM gear will take about 4,800 square feet if all are on deck, bringing the total space needed to about 32,000 square feet or about that needed for the hospital.

Special equipment includes two winches that can be mounted on the hangar deck in the fantail to handle and stream the mine sweep cable and cutters. The overhead rail and crane installed for handling containers will be useful in this connection, particularly if it is designed to be extended aft to handle material over the stern. Other than this arrangement, the disposal of the rest of the equipment is far from critical, if proper attention is paid to basic convenience. Manpower requirements for the 16 helicopters and associated gear are 53 officers and 312 enlisted men.

No particular imagination is needed to extrapolate this ship to peacetime

uses, where handling comparatively heavy gear into and out of the ocean is needed. Oceanographic and seabed exploration, deep-sea buoy tending, bringing supplies to deep water mining and oil rigs, et cetera—all these are tasks for which the ACS would be useful.

Aircraft for the Air Capable Ship.

Sea Control Aircraft. Up to this point in the discussion, the missions of the ACS have been limited essentially only by the limitations of the three aircraft employed; however it is reasonable to suppose that there will be further development in VTOL aircraft technology. As a first step in this process, a list of suggested capability goals for the next generation "sea control aircraft" has been set forth.

The sea control aircraft is small and has three separate missions: to find and kill enemy submarines; to intercept and destroy enemy cruise missiles and to obtain and keep plots of air, surface, and submarine situations; and to act as a command and control center for task forces and convoys. The external configurations of the aircraft will be essentially identical for the three missions, but the weapons load, avionics, and crew dispositions will be quite different, and it may not be possible to change configuration from one mission to another except during construction.

The aircraft will be operated primarily from austere bases afloat where sophisticated maintenance equipment and personnel will not be available. They will be required to fly an average 16 hours per day for up to 30 days under these conditions, or two sorties of about 8 hours each.

Particular attention is to be paid to crew comfort. The crew is to be kept at a minimum but will bear important independent responsibilities in performing the airborne work which can be successfully carried out only by alert and vigorous personnel. Irritating conditions of noise, vibration, ride quality, lighting, and air conditioning which may impair crew performance are unacceptable. Serious consideration should be given to automating as many functions as possible, including the flight controls.

Since it is planned to operate this aircraft from a variety of small ships, it must have a vertical take off capability. The rate of climb at zero forward speed must be at least 500 feet per minute on a standard Navy hot day. The aircraft is to be capable of being landed under zero-zero conditions, and the gross weight is not to exceed 25,000 pounds with a limiting maneuver load factor of at least 3.5 g. (gravity).[12]

The ASW configuration of the sea control aircraft will have the role of finding and killing enemy submarines. The crew is to consist of a pilot, tactical coordinator, and sensor operators. Whether this makes the crew three or four men depends almost entirely on how much automation can be provided. In any case the aircraft is to be self-sufficient and capable of autonomous operation; in particular, its capabilities shall be such as to minimize communications by the ship. The recoverable or expendable stores are not to exceed 1,000 pounds. In addition, two mark 46 torpedoes weighing 530 pounds each must be carried internally in a heated bomb bay. The aircraft must be able to fly out 150 nautical miles to a radius point and spend at least 7 hours on station. The cruise altitude and station altitude may be selected to meet the needs of the aircraft and sensors, respectively. The aircraft must be capable of executing at least one attack before returning to the ship with the usual reserves.

For the antiair warfare (AAW) configuration of the sea control aircraft, the crew will consist of a pilot and a missile control officer. The primary targets are enemy cruise missiles. The aircraft is to fly out to a CAP station at a radius of

50 nautical miles. The altitude is to be chosen to maximize the effectiveness of the AAW missiles. Endurance on station should be at least 8 hours.

The airborne early warning (AEW) version would provide for the command and control configuration of the sea control aircraft. Its role is to perform the main command and control functions in the vicinity of a U.S. Navy task force or convoy. The crew will consist of the pilot, tactical commander, and two radar operators. The avionics system, plus the portable extended surface plot, is not to weigh in excess of 3,800 pounds. The radar must be capable of detecting at 200 miles enemy bombers flying at 50,000 feet at Mach 2.7 and presenting a radar cross section of 1 square meter. The radar must also be capable of detecting ships and cruise missiles. Finally, the system must easily vector friendly aircraft to meet enemy bombers, cruise missiles, or to identify and attack surface targets. The portable extended surface plot is to keep track of aircraft, ships, and submarines as well. The aircraft is to be capable of flying out 200 nautical miles and spending as much time on station as possible before returning to the ship with the usual reserves. Since this configuration will at times be acting as a forward picket, it shall carry at least two Agile missiles as a "last ditch" self-defense.

The utility transport configuration should be considered definitely subordinate to the preceding three. However, it can be provided with little or no penalty if considered early in the design. For instance, the location of cables, wiring bundles, hydraulic lines, et cetera, needs to be located so that eventually a large side loading hatch and windows can be cut in the fuselage without having to reroute any of these systems. Furthermore, the fuselage structure needs to be designed so that the necessary reenforcing for a large hatch and windows can be easily added without interference. It may also be possible to add a hoist which would allow this configuration to be used for search and rescue (SAR). If the basic design is carefully thought out, these applications should cause little difficulty or penalties.

A second small multipurpose aircraft, the seapower aircraft[13] would be used either to intercept and destroy incoming bombers flying at Mach 2.7 at a high altitude or to strike a wide variety of enemy land and sea targets. It is to have extremely high longitudinal acceleration and great agility. The basic external configurations of the aircraft are identical for the differing roles. The avionics systems, weapons loads, and probably the cockpits will be quite different. It may not be possible to change from one configuration to another except during original construction. This aircraft, like the sea control aircraft, will be operated from austere bases afloat and ashore where sophisticated maintenance equipment and personnel will not be available. The aircraft is required to be able to maintain five sorties a day for up to 30 days. To perform its various roles, the following modification packages may be envisioned:

- Configuration A (deck launched interceptor)—The aircraft is to have an average longitudinal acceleration of 25 knots/second from a standing start at sea level to Mach 2.6 at 36,000 feet on a standard Navy hot day. It will then fly at Mach 2.6 cruise climb to 70,000 feet at a radius point of 150 nautical miles. A climb profile that reaches the radius point in less than 7 minutes will be acceptable. It must be able to engage in combat for 2 minutes and return to the ship with the usual reserves. Deceleration from Mach 2.6 and descent from altitude may count in the distance made good returning to base.

The aircraft is to be single place. Because of the high load factor capability of the aircraft, it will be acceptable to put the pilot in a semisupine position. Superb visibility for the pilot is essential. It is expected that the

installed avionics will weigh about 1,750 pounds. The primary armament load will be four long-range missiles of the Super-Sparrow type and a 20mm. cannon. When the long-range missiles are carried, it is not necessary to carry ammunition for the cannon. No internal modifications are to be made to carry Sparrow, Sidewinder, or Agile in lieu of Super-Sparrow.

The aircraft design gross weight is not to exceed 25,000 pounds. In a ready alert condition, the time from engine start to airborne is not to exceed 30 seconds.

- Configuration B—Identical to configuration A except that it is able to perform the other fighter roles. It should take off and climb to best cruise altitude with minimum fuel expenditure and fly at best cruise for 500 nautical miles, loiter for 1 hour at best altitude, engage in combat for 5 minutes, and return to base with the usual reserves.

The weapons load should be four, and preferably six, missiles of the Agile type, plus ammunition for the 20mm. cannon. The additional fuel required for this mission may be carried externally, but it must be protected. The overload of fuel and ordnance compared to configuration A shall be arranged to minimize the effect on the superb agility of the baseline aircraft. The gross weight may be increased to, but not exceed, 36,500 pounds.

- Configuration C (light attack) —This is the strike configuration and is identical to configuration A except for the cockpit and installed avionics.

This is a single place aircraft capable of day and night attack missions. It is probably desirable for the pilot to be seated upright provided his vision is not impaired. It is expected that the installed avionics will weigh about 2,750 pounds. The gross weight may be increased to, but not exceed, 36,500 pounds. The permissible weight increase over configuration A is 11,500 pounds; 1,000 pounds of this increase is due to avionics, the remaining 10,500 pounds may be divided between external protected fuel and weapons.

The maximum range mission is to be 500 nautical miles at best cruise speed

BIOGRAPHIC SUMMARY

Mr. F.W.S. Locke, Jr., earned his M.E. at Stevens Institute of Technology. He then affiliated with Stevens as a specialist in seaplane development before joining the Naval Bureau of Aeronautics in World War II as a Hydrodynamics Consultant, where he subsequently became Assistant Director of the Research Division. Mr. Locke was later appointed as the Assistant Director of Advanced Systems Division of the Bureau of Naval Weapons and is now serving as the Head of the Aircraft Branch of the Advanced Concepts Division, Naval Air Systems Command.

BIOGRAPHIC SUMMARY

Miss Virginia Withington earned her B.A. from Vassar College. She served in the Bureau of Aeronautics during World War II as Naval Aviation Observer (Navigation) in charge of development and procurement of air navigation equipment. Her subsequent civilian positions have included teaching physics at the Escola Tècnica de Aviação, São Paulo, Brazil; project engineer on the periscopic sextant and advanced navigation systems, Kollsman Instrument Corporation; research assistant at Yale University's Marine Physics Laboratory; and supervisor of ASW research, Sikorsky Aircraft. Miss Withington is currently a consultant with the Advanced Concepts Division of the Naval Air Systems Command and the Naval Undersea Systems Center, Newport.

and altitude, plus 1 hour loiter. The ordnance load for the maximum range mission should be at least 4,000 pounds. The maximum ordnance load desired is 8,000 pounds but not necessarily on the maximum range missions.

Conclusions. In the uncertain future, the Navy's best strategy will be to adopt equipment that will serve numerous functions so as to be responsive to the changing international climate. Not only will this provide resources that can easily be adapted to respond to a range of unexpected threats, but it could also provide a believable rationale for the Congress and the voters that is now lacking.

The philosophy of the air capable ship provides an almost infinitely variable capability when suitable aircraft, modularized maintenance facilities, and specialized mission equipment are embarked. By exploiting containerization to the utmost, a simple and inexpensive ship can be made to play many roles to which it could be converted in less than a week's time.

The consequences of this are enormously significant and can deeply affect the Navy's force composition. Some of these are:

- The cost of such individual ships being small, the Navy can afford to purchase them in significant numbers, thus driving individual unit cost down. Also, the program should be palatable even in peacetime, since the ships have many uses to the Nation under a wide variety of circumstances.
- Since aircraft and aircraft equipment can be built very much more rapidly than can ships, the discovery of new weapons and technology—ours or theirs—can be respectively rapidly deployed or countered.
- A high degree of readiness of vessels, aircraft, and personnel can be maintained, since real-life missions will constantly require the application of skills relevant to combat preparedness as well.
- The merchant marine can acquire a substantial number of these ships under subsidy, inasmuch as their indubitable value will not have to be argued. And since the merchant marine is one component of seapower, any naval influence on its healthy development should be looked upon with favor.
- The necessary impetus will exist to encourage the development of VTOL aircraft of varying performance and capability. The payoff to the Nation will be not only in terms of naval capability, but also in terms of commercial air transport.
- Finally, the alternative to the air capable ship seems to be large, costly, and specialized vessels of questionable utility and capability in the face of some of the possible threats. While some of these vessels will undoubtedly be necessary, total reliance on them would appear to be unwise. The cumulative factors, the Nation's skepticism, the uncertainties of the future, and rapidly developing technology enforce a major reliance on the air capable ship, flexibly employed.

FOOTNOTES

1. Vincent Davis, *The Admiral's Lobby* (Chapel Hill: University of North Carolina Press, 1967), p. 74.
2. Alfred T. Mahan, *The Influence of Sea Power upon History 1660-1783* (Boston: Little, Brown, 1894).
3. Fred T. Jane, *Heresies of Sea Power* (London: Longmans, Green, 1906).
4. Harold G. Bowen, *Ships, Machinery and Mossbacks* (Princeton: Princeton University Press, 1954).
5. *Naval Aviation Containerized Maintenance Support USS Wasp (CVS-18) Operational Test.* Prepared for USNASC by American Power Jet Co., November 1971.

6. The description of the mobile support system ship is derived from: F.W.S. Locke, Jr., "The ASW/AAW Escort Carrier Concept, a Review of Three Brief Studies," (U) Report No. 3032-67-01 (NAVAIR Advanced Systems Concepts Division, February 1967) CONFIDENTIAL; R.F. Norford and F.R. Johns, "AAW/ASW Small Carrier Concept" (U) Report No. NADC-AW-6706 (NAVAIR Development Center, 15 March 1967) CONFIDENTIAL; Sikorsky Aircraft, "VTOL Escort System Study" (U), Sikorsky Report, 20 February 1970, v. I, II, SECRET; North American Aviation/Columbus, "Advanced ASW Air System Concepts" (U), North American Rockwell Report NR 70H-187, 15 December 1970, SECRET; S. Bartha and F.H. Ringler, "Feasibility Study on the Design and Development of a VTOL Blast Controlling Platform," Republic Aviation Corp., U.S. Army Contract Report No. 3-123, August 1965; R.P. Johnson, et al., "Determination of Weight, Volume and Construction Costs for Naval Combatant and Auxiliary Ships" (U), RM-5686-PR (Santa Monica, Calif.: Rand, April 1969), CONFIDENTIAL; F.W.S. Locke, Jr., "Suggested Capability Goals for a Sea Control Aircraft Concept," NAVAIR Report No. 3032-71-02, July 1971.

7. "Letter from Ambassador Phillips to U.N. Seabed Committee Chairman," *Department of State Bulletin*, 15 June 1970, p. 741; "Draft U.N. Convention on the International Seabed Area: U.S. Working Paper Submitted to U.N. Seabeds Committee," *Department of State Bulletin*, 24 August 1970, p. 209-217; U.S. Intelligence Agency, Press Release, 3 August 1971, concerning submission of draft articles by the U.S. Representative to the Committee on Peaceful Uses of the Sea-Bed.

8. Edward F. Oliver, "Gargantuan Tankers," *United States Naval Institute Proceedings*, September 1970, p. 41.

9. "Shipping Sans Suez," Reprinted in *Atlas*, October 1971 from *The Far Eastern Economic Review*, Hong Kong.

10. J.H. Stover, "Modern Medical Support of Amphibian Operations," Presentation, Brussels, Belgium: November 1971; Bureau of Medicine and Surgery, "Proposed Alt Medical Space Requirements" (for cost study purposes only), Code 49, 27 August 1971.

11. "An Examination of the LPH-2 as an Airborne MCM Support Ship" (U), Presearch, a report prepared under contract for NAVAIR 5305, 6 October 1971, CONFIDENTIAL.

12. The material in this section is in part derived from: Autonetics, *Fully Automatic Airborne ASW System (FAA) Study*. (U), 12 June 1968, CONFIDENTIAL; Lockheed/Raytheon, *Slow Speed Aircraft Surveillance System* (U), 20 March 1968, v. I, II, SECRET; North American Aviation/Columbus, "Advanced ASW Air System Concepts" (U), Report NR 70H-187, 15 December 1970, SECRET; Boeing, "Crew Effectiveness and Endurance in Navy Patrol Aircraft, Phase II" (U), Report D653621, April 1969, v. I, II, III, CONFIDENTIAL.

13. Material concerning the Sea Power Aircraft is taken from: Vought Division, "LTV Advanced VTOL Fighter Systems Concepts" (U), Report No. 2-55100/gR-50556, 28 May 1969, SECRET; G.W. Ellis and H.E. White, "Time-Distance Relationships of an Advanced-Based Interception System for Fleet Air Defense" (U) NSRDC Tech Note AL-C-188, December 1970, CONFIDENTIAL; ConVair Division, General Dynamics, "A Conceptual Study of Navy Advanced Fighter Alternatives" (U), Report No. GDCA-DDM 71-001, CONFIDENTIAL; G.W. Ellis, and H.E. White, "The Effects of Acceleration Characteristics on the Performance of Advanced-Based Interceptor Systems" (U), NSRDC Tech Note AL-C-216, August 1971, CONFIDENTIAL.

Ψ

Weapon systems are changing so rapidly that between the time Congress authorizes and appropriates for a ship and the time it is built, the weapon system is often obsolete; therefore, we must build the type of ship that is capable of having its weapon system changed in the future. You need the kind of platform that can take different types of weapons systems; if necessary, every 5 or 10 years.

VADM Hyman Rickover, USN,
House Appropriation Hearings FY 1967

The efficient management of an operation as complex and extensive as the Department of Defense is a most formidable task indeed, one which cannot be ignored in today's world. Understanding DOD's approach to solving this problem, known as the Planning, Programming, and Budgeting System, is therefore of vital concern to every professional military officer. While the current system is far from flawless, it has proven its ability to adjust to new management requirements placed upon it and will continue to provide the military manager unlimited opportunities for innovation to meet the challenge of the future.

THE DEPARTMENT OF THE NAVY AND THE DOD PLANNING, PROGRAMMING, AND BUDGETING SYSTEM (PPBS)

An adaptation of a lecture given at the Naval War College

by

Captain Charles F. Rushing, U.S. Navy

Introduction. Of the thousands of military officers on active duty, only those who have served in Washington, D.C., since 1961 have had the opportunity for direct involvement in the Department of Defense (DOD) Planning, Programming, and Budgeting System (PPBS). And of these only a relatively few have become intimately associated with all aspects of the multifaceted system that manages DOD's resources. Today PPBS serves as the *raison d'etre* justifying the bulk of the military billets in the Washington, D.C., area. The Pentagon is the hub of the system, with other offices scattered throughout the District and the suburbs of Maryland and Virginia. From here the Department of Defense resources of men, money, and material are managed in a network that reaches to all parts of the world.

For the middle grade and senior military officers who will eventually serve in the Washington, D.C., area, there is no escaping PPBS. Whether involved with the development of strategy or as a program manager or in juggling the details of a budget submission, every officer should know how his function contributes to the overall scheme. This paper is an attempt to provide the reader with the evolutionary development and broad concept of PPBS so that he may appreciate his role, now or in the future, in the management of DOD's resources.

---

*Where not footnoted, technical information in this article taken from the Department of the Navy *Programming Manual* (OP 90P-1C). Recent changes not reflected in the latest edition of the manual provided by the Department of the Navy Program Information Center (DONPIC).

To begin, let me describe in a few words a system so comprehensive that only a very broad treatment can be presented here. The steps of PPBS can be generalized in this manner:

- *Strategy* developed in consideration of the *threat.*
- *Force requirements* developed to support the *strategy.*
- *Programs* developed to provide, on an orderly basis, ships, aircraft, weapons systems, and manpower over a period of time, with due consideration of the *total cost to the Nation.*
- *Funds* budgeted in such a manner as to obtain the required forces and weapons systems within the resources that the Nation provides.[1]

One might legitimately ask, "How else would a world power manage its military establishment?" While the Department of Defense is managed pretty much along those lines today, this has not always been the case. Until the post-World War II era, financial management in our Government was most cumbersome and inefficient. For more than 150 years Congress simply appropriated funds "by the seat of its pants," and Government agencies were managed in much the same fashion. Not until after World War II were positive steps initiated to correct the enormous inefficiencies that existed in financial management of the Military Establishment.

Charles J. Hitch, who was instrumental in developing PPBS, relates that,

> As late as 1948, the Navy Department was still managing its affairs through some 130 separate appropriation accounts, and the Congress for that year had actually appropriated new funds for 87 of them. These appropriation accounts ranged in size from fifty dollars for the payment of certain claims to over one billion dollars for pay and subsistence of Navy personnel. There was even a separate appropriation of ten dollars for the US Naval Academy Museum fund in 1947.

Mr. Hitch added that the situation in the War Department was no better.[2]

Each of these separate appropriation accounts had to be separately administered, and funds could not generally be transferred from one account to another except by a special act of Congress. As the first step in an evolutionary process that continues to this day, Defense Secretary Forrestal and his Comptroller, W.J. O'Neill, developed an entirely new, uniform budget structure for each of the three military departments. From their efforts evolved the five major groupings of appropriation accounts that still exist today: Military Personnel; Operation and Maintenance; Procurement; Research and Development, Test and Evaluation (RDT&E); and Military Construction.[3]

However, that was only the beginning as standardization and reduction of numbers of appropriations accounts were not enough. A system was needed to correct a multitude of inefficiencies that had existed in our Military Establishment for so many years, brought on by the military departments planning and budgeting in relative isolation from one another.

By 1948 Canada and the United Kingdom, as well as the United States, had begun reorganization of their Military Establishments into single defense agencies. All were convinced that only through centralized defense management could realistic national security objectives be formulated. Mission duplication, parochialism, isolated planning, and the resultant waste of defense dollars had to be eliminated if we were to achieve an organization truly responsive to national security objectives and mushrooming changes in technology. This would require unification in a real sense—adding a Secretary of Defense and changing the organization structure could not do the job alone.

Unfortunately, "unification," until

1961, existed in name only. The Army's strategy and force structure was based on a long war of attrition with conventional weapons, while the Air Force based its plans on a relatively short nuclear exchange.[4] Neither of these services seriously considered the opposite alternative, and the Navy was left somewhere in the middle. Within broad limits each of the services decided where to spend its money after receiving a set percentage share of the Defense budget. The Joint Chiefs of Staff, as a singular body, did not play a significant role anywhere in the process.

The year 1961 is considered by most as the turning point in military management and the year in which unification, as we know it today, began to materialize. When Robert S. McNamara became Secretary of Defense that year, he was concerned that in many instances the several military departments did not function as a team in carrying out the principal missions of the Defense Establishment. The military planning function and budgeting function of Defense financial management were already well established, but it was clear that a new function was needed to bridge the gap between planning and budgeting to provide the data needed by top Defense officials to make the really crucial decisions.[5] That *bridge* was "programming."

Several years before McNamara assumed the position of Secretary of Defense, Charles J. Hitch, with the Rand Corporation, had developed a concept which incorporated the features desired by McNamara: the Planning, Programming, and Budgeting System. As the new Department of Defense Comptroller, Hitch recommended to McNamara that PPBS be adopted, estimating that such a major change would take 18 months to implement. Hitch was directed to install the system in 6 months. Somehow the feat was accomplished, forming the basis for the fiscal year 1963 DOD budget.[6]

Such a revolutionary change in so short a time would normally have been doomed to failure, but McNamara was determined. While few supporters of Robert S. McNamara remain in the military, one must candidly admit that without the decisiveness and determination of a McNamara and the genius of a Hitch, the Defense Establishment might still be in the dark ages of management.

Within 2 years of operation, the future of PPBS was assured. Through an endless series of evolutionary changes, PPBS advanced steadily toward its goal:

- Budgets in balance with programs,
- Programs with force requirements,
- Force requirements with military missions,
- Military missions with national security objectives, and
- The total dollars required by the plan for future years do not exceed the Secretary's responsible opinion of what is necessary and possible.[7]

As with all other things conceived by man, however, the system is not perfect. The PPBS is a living, growing mass of people and computers that generates tons of paper each day. Procedures are ponderous and inefficient, but infinitely better than we ever had before 1961. Since 1961 PPBS has adapted itself to changing personalities in the Office of the Secretary of Defense (OSD) with surprising flexibility. By 1965 PPBS had proved itself so successful in the management of DOD's financing that President Johnson made its adoption mandatory in all agencies of the executive branch.[8] Furthermore, PPBS is now used to some degree in several large corporations—due largely to the influence of retired military officers who have joined industry.

Remembering the very generalized description of PPBS at the beginning of this essay, the system can be summarized in different terms by reducing it to the six basic steps shown in the left-hand column of figure 1. Generally

	Planning
1. Collect intelligence 2. Appreise the threet 3. Develop strategy to meet the threat 4. Devise force levels to support the strategy	The process of determining actions and specifying the *time-phased* military force requirements to accomplish a mission.
	Programming
5. Program resources	The process of translating planned military force requirements into *time-phased* manpower and material resource requirements.
	Budgeting
6. Annual budget ellocetion to procure men and materials	Tha process of translating manpower and material resource requirements into *time-phased* financial resources.

Figure 1

accepted definitions of the three phases of PPBS, *Planning, Programming,* and *Budgeting,* are arranged on the right, opposite the basic steps which operate within the phases: Note that the term common to each definition is "time-phased," a feature which will be discussed later.

Planning. Planning determines military strategies and force requirements to achieve national security objectives. It includes the evaluation of alternative means of achieving specific goals, it decides upon objectives, on changes in these objectives, and on the policies that govern the acquisition, use, and disposition of military resources. Planning is accomplished by the Joint Chiefs of Staff in concert and coordination with each military service. Strategic guidance and fiscal guidance are highly significant controls over the planning process, injected by the Office of the Secretary of Defense. While the Secretaries of the military departments certainly exert an influence over their respective service Chiefs every step of the way, the civilian officials have no assigned or assumed responsibility in the planning phase of the PPBS. This is an important aspect of the system.

The best way to describe the planning phase of PPBS is to look at the documents produced by it and at the major guidance directives that are issued by the Secretary of Defense and the Joint Chiefs of Staff during the process:

Joint Intelligence Estimate for Planning (JIEP) summarizes factors and trends in world power relationships and assesses the capabilities of important foreign nations. This estimate is influenced by all national intelligence-gathering agencies, civilian and military, and by the National Security Council.

Joint Long-Range Strategic Studies (JLRSS), based on the JIEP, describe the role of the military power of the United States 10-20 years in the future.

Navy Strategic Study (NSS), *Marine Corps Long-Range Plan* (MLRP), and similar studies and plans from other services: present service concepts in support of the Joint Long-Range Strategic Studies.

Joint Strategic Objectives Plan, Volume I (JSOP I):* provides the JCS concept of the military strategy and force planning guidance to attain the national security objectives and the military objectives derived therefrom.

In the *Policy and Planning Guidance,* the Secretary of Defense, as direct representative of the President, reviews

*It is suggested that the reader use figure 2 as an aid in following the progress of the system as it develops. Note that the figure covers the complete 18-month cycle and that beginning in June 1971 two cycles are in operation concurrently.

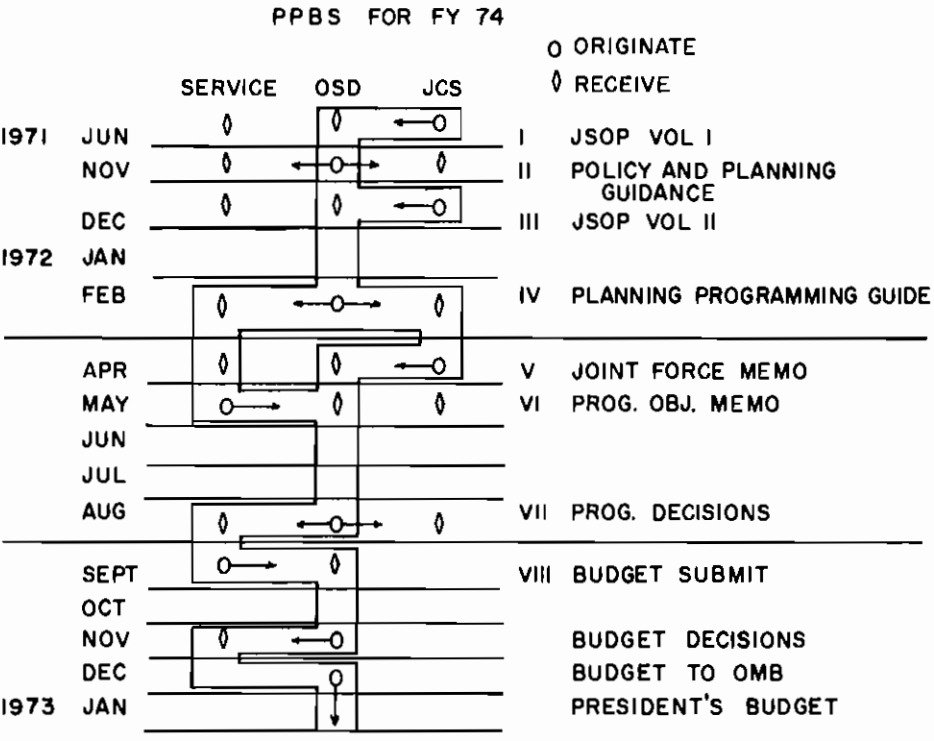


Figure 2

Source: DONPIC Handout, January 72, updated by author.

JSOP I and establishes the strategic framework objectives for the planning, programming, and budgeting phases of the PPBS for the entire Department of Defense.

The *Joint Strategic Objectives Plan, Volume II* (JSOP II) translates the national security objectives and the military strategy of volume I, as modified by the Policy and Planning Guidance, into force objectives required to support that strategy. JSOP II contains force tables, recommended major force level objectives, analyses of the rationale and cost and manpower estimates for these objectives, and major force issues on which decisions are pending.

It is important to note here that the JSOP II is *not* fiscally constrained, and for good reason: without fiscal constraints all force level alternatives introduced by the service Chiefs, parochial as they may be, have their day in court in the joint arena. The constraints on JSOP II traditionally have been intuitive although they represent attainability and feasibility. (As a point of interest, with the increased emphasis on participatory management since 1969, the estimates for JSOP II have been about 25 percent closer than before to DOD fiscal guidance introduced later in the cycle.) As the Joint Chiefs' estimate of the total force requirements to meet the threat, JSOP II influences the Secretary of Defense's recommendation to the President for the total Defense budget.

The *Planning and Programming Guidance Memorandum* (PPGM) culminates the planning phase. Issued by the Secretary of Defense to the Joint Chiefs of Staff and the military departments concurrently, it sets the stage for the programming phase by providing revised policy and planning guidance and assumptions and includes fiscal guidance

(for the first time), Southeast Asia planning assumptions, and material support planning guidance. This is the most significant strategic document in the PPBS because it ties strategy to fiscal constraints.

Programming. The *Joint Forces Memorandum* (JFM) is the initial document in the programming phase. Submitted by the Joint Chiefs of Staff to the Secretary of Defense as a response to the PPGM, it provides recommendations on the joint force program within stated guidelines. Through this document the service Chiefs insert their *own* programs into the system, and these may well differ from the service Secretaries' programs submitted through the Program Objectives Memoranda, which will be discussed later.

Programming converts the plans of JSOP II (as modified by the PPGM) to missions and program elements within broad program categories.

The most significant document in the programming phase is the *Program Objectives Memorandum* (POM). The POM are memoranda submitted to the Secretary of Defense by the Secretaries of the military departments which recommend, describe, and justify the total resource requirements within the fiscal constraints established by the Secretary of Defense in his PPGM.

One POM was submitted by the Department of the Navy for the fiscal year 1973 budget, which will give you an idea of the size of the "memorandum" described in the definition. Basically, the POM provides the rationale for all proposals which differ from the current military department approved program, all substantiated by economics analyses.

The relationship of the POM to the Joint Forces Memorandum is the same as the relationship between the Secretary of the Navy and the Chief of Naval Operations or the Commandant of the Marine Corps.* Before formulation of the JFM in the JCS arena, the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps (CMC) submit to the Secretary of the Navy a skeleton POM, addressing the CNO/CMC programs. Subsequent discussions between the Secretary and his Chiefs may uncover differences of opinion. While these officers may be *influenced* by the Secretary of the Navy, they are not *controlled* by him: their inputs to the JFM need not agree with SECNAV's program. When the POM is submitted by the Secretary of the Navy as *his* program, he is required to address the differences from the JFM, including justification. The Secretary of Defense now has the benefit of opinions from both sides—military and civilian.

In the POM we have seen two significant improvements made in PPBS since 1969. First, the Joint Chiefs of Staff now have a major role in the decision-making process, while prior to 1969 its role was only advisory. Second, the Secretary of Defense's fiscal guidance comes early in the cycle, prior to submission of the service program, and it is relatively firm. Before 1969 service budgets were submitted without firm fiscal guidance, and the tendency was to submit a larger total program than the eventual fiscal constraint would cover. As a result, with too little time to weigh alternative programs, significant program decisions were being made within the Comptroller organization of the Department of the Navy (NAVCOMPT) and/or the Office of the Secretary of Defense, despite the fact that NAVCOMPT's real purpose is only to check the fiscal validity of the Navy's budget submission.

As noted earlier, POM requirements

*—Implementing procedures for PPBS within the Department of the Navy often are similar but not necessarily identical to those of the other Departments. Procedures followed within the Departments of the Army and Air Force, however, lie beyond the scope of this paper.

are supported by economics analyses, in keeping with DOD directives. Normally, these studies would be provided by program managers in the Naval Material Command or programs sponsors in OPNAV. The Systems Analysis Division of OPNAV, OP-96, checks these before inclusion in the POM. Further, OP-96 is kept busy conducting special studies in areas identified by the Office of the Secretary of Defense for selected analysis early in the PPBS cycle. The scope of these analyses are determined jointly by OSD and the services. This is a far cry from the days of McNamara's Whiz Kids, who conducted their own analyses often without the benefit of help from the military departments. At that time it was generally felt by the services that those studies were biased by arbitrary Secretary of Defense decisions. OSD still has its systems analysis office, but now at least the Navy has the opportunity to make its influence felt in this particular area.

Work on the POM and JFM is a continuing process. Each time the Chief of Naval Operations, Commandant of the Marine Corps, or Secretary of the Navy makes a program decision, a working copy of the current POM is updated. Thus, as JFM and POM submission time draws near, the budget year documents, in theory, can be prepared by simply cranking in the Planning and Programming Guidance Memorandum. This is an oversimplification. Actually, each program decision generated costs money, men, and material. Since the size of the next Navy budget cannot be anticipated, trade-off decisions should be made concurrently with the addition to the POM of a new or changed program. This is seldom done since the tendency is to put off hard decisions. Nevertheless, the "moment of truth" must come, as it does, when the POM deadline finally approaches.

The programming phase of PPBS theoretically ends on receipt of the Secretary of Defense's Program Decision Memorandum (PDM), which follows the POM by about 4 months. Upon receipt of the POM, feedback from the Office of the Secretary of Defense comes in in the form of issue papers, which identify major issues and alternatives, and through conversations "over the back fence" between high-level personnel in OSD and OPNAV. So the opportunities for reclama* are there, and reclamas can usually be submitted and answered before receipt of the final program decisions. The calendar calls for the Program Decision Memorandum in August, and the service budgets *must* be submitted to OSD by 1 October. While reclamas are still being processed, the current DOD total program is updated to reflect the Secretary of Defense's decisions, and work on the service budget submission progresses from August through September.

The base for the Department of Defense programming phase is the *Five-Year Defense Program* or FYDP. The FYDP records, summarizes, and displays the decisions that have been approved by the Secretary of Defense as constituting the Department of Defense's program. It is a management tool that keeps management informed of what has been accomplished in the past and what is to be accomplished in the future to support the national strategy decisions. To achieve this, the FYDP displays the manpower and dollars involved in these approved programs for the fiscal years 1962 through the current year plus 5 additional program years. As an added feature, force authorizations are displayed for the current year plus 8 program years. The purpose of extending the listing of forces for 3 more years is to provide management more visibility for long leadtime procurement decisions.

These displays of manpower, dollars, and forces are further categorized in

*A request for reconsideration, usually accompanied by further justification.

terms of major programs. That is, those programs in which the major decisions are required to insure that the DOD resources are expended to provide the capabilities dictated by the national strategy.

The FYDP major program structure recognizes the interfaces and combinations of forces assigned to the several services. In other words, each major program category contains programs and program elements of all service agencies that support that major program. A few examples are shown in parentheses with this list of the 10 major programs:

0 (Zero)	- Support of other nations
I	- Strategic forces (SAC, FBM system, etc.)
II	- General purpose forces (TACAIR, Army divisions, etc.
III	- Intelligence and communications
IV	- Airlift and sealift
V	- Guard and Reserve forces
VI	- Research and development
VII	- General supply and maintenance
VIII	- Training, medical, and other personnel activities
IX	- Administration and associated activities

All DOD activities are grouped into program categories and program elements within each major program. Today there are over 1,100 different program elements. Program elements are defined as program functional subcategories: the forces, weapons, and support systems with which mission programs are accomplished.

Programming requires the full program cost concept, otherwise it is not possible to compare alternative uses of resources. Each program element is carried in the FYDP with a full breakdown of forces assigned to that element. (For instance, if the element is Navy Tactical Air Force Wings, *forces* would be the number of squadrons.) Full costs of investment or acquisition, research and development, and operations are further broken down into "appropriations" such as RDT&E, Military Construction, Procurement, and Operations and Maintenance.

The matrix shown in figure 3 will give you a general idea of how the FYDP is structured.

Since the FYDP is both a *record* of historical costs and a *program* of future costs, costs are displayed in consonance with the year they represent: costs for the years *prior* to the current year are actual obligations; current year costs are actual when known, otherwise they are the programmed costs; budget year and out-year costs should reflect price indices or inflationary trends—except where controlled by law. Since the pay of military personnel and civil service personnel is controlled by legislation, it is considered imprudent to anticipate. This is a controversial issue as Congress is apparently jealous of its right to change the pay legislation at any time and does not want to be "second guessed."

The FYDP is updated at least twice each year, in October and January. The October update records the final Secretary of Defense programming decisions; the January update records the President's congressional budget decisions. These updates reflect the Secretary of Defense's decisions up to that time and obligations as of that time.

Although the FYDP is the base for PPBS, it is not used in its published form by the military departments for their programming. The FYDP lists *all* DOD program elements in the structure of the 10 major programs, all of which contain program elements of more than one service. All OSD planning and programming decision documents are in terms of *Major Mission and Support Categories*, so that each service receives decisions made by the Secretary of Defense in terms consistent with the decision environment and organization within that service. The Major Mission and Support Categories are:

- Communications
- Research and Development
- Support to other Nations

YEARS →		PRIOR YEARS			C Y	B Y	OUT YEARS						
		62	70	71	72	73	74	75	76	77	78	79	80
FORCES →				T	H	I	N	G	S				
R	RD T&E												
&	MILCON												
D	(TOTAL)												
I	PROC												
N	MILCON												
V	(TOTAL)		D	O	L	L	A	R	S				
O	O & MN												
P	PROC												
E	MILPERS												
R	(TOTAL)												
T. O. A.													
M	OFFICER												
I	ENLISTED												
L	(TOTAL)		P	E	O	P	L	E					
C	U. S.												
I	FOREIGN												
V	(TOTAL)												

Figure 3

- General Support
- Miscellaneous Costs
- Strategic Forces
- Land Forces
- Tactical Air Forces
- Naval Forces
- Mobility Forces
- Intelligence and Security

This is the structure in which the Navy/Marine Corps version of the FYDP, the "Department of the Navy Five Year Program," or DNFYP, is displayed. This document is the Secretary of the Navy's approved program for the Navy and the Marine Corps. The DNFYP is updated to reflect decisions of both the Secretary of Defense and the Secretary of the Navy. Within the DNFYP structure, each major mission and support category contains program elements, which, in turn, contain listings of all the resources needed to support the military missions. Dollar resources are expressed as the five basic appropriations accounts discussed earlier: Research and Development, Test and Evaluation; Military Construction; Procurement; Operations and Maintenance; and Military Personnel. Forces and manpower figures are also included.

> The only bridge between the planning, programming, and budget structure is via common program data [broken into the above appropriations accounts] in a computerized computation process. The resultant inability to establish a direct, perceptible translation between major mission/support category costs and appropriation funding is a source of continuing difficulty in program planning.[9]

We have seen the structure of the PPBS in the form of the FYDP and the DNFYP. The objective of the programming phase is to cause changes to be made to the FYDP, so that when the President's budget is submitted to Congress it will reflect, as nearly as the Secretary of Defense will allow, the service Secretary's desired program. Happy with it or not, the services have had many opportunities to make their cases with the Joint Chiefs of Staff and the Secretary of Defense, and no more

adequate form of redress can be designed into a system than that.

Budgeting.[10] The budget process is the final phase of PPBS. In the Department of the Navy, NAVCOMPT, through a series of hearings and rehearings with OPNAV and Commandant of the Marine Corps representatives, checks the validity of program priceouts and transforms the DNFYP to the budget submission format or "Bluebook." Total obligational authority for the current year, budget year, and prior year occupies most of the pages of the Bluebook, providing Congress with the information needed for deliberation in the formulation of its appropriations bills.

The next step in the DOD budget process is the *Budget Review.* This review is conducted jointly by OSD and the Office of Management and Budget (OMB, formerly the Bureau of the Budget). Here, procurement lists are examined in greater detail than in the programming process. Similarly, production schedules, leadtimes, status of funds, prices, et cetera, are studied by OSD and OMB. To put it another way, the Budget Review is simply a thorough analysis of the first annual increment of the FYDP.

Based on the Budget Review, the Secretary of Defense issues *Program Budget Decisions* (PBD's), which are received by the services and modify the budget year (and prior years as appropriate) of the FYDP. They may also influence programs in future years.

By this time there are not many days before the Secretary of Defense must submit his budget to the President. Often there remain as little as 24 to 48 hours for the services to process final reclamas to the PBD's. Only after the last reclama has been processed and the DOD budget finally is locked in does the Office of Management and Budget combine the DOD budget with the rest of the national budget to be presented to the Congress by the President early in January (6 months prior to the fiscal year covered by the budget). Congressional staffs review the budget and service backup papers briefly, and congressional review commences early in February.

Four congressional committees are involved in the hearings: House and Senate Armed Services Committees and House and Senate Appropriations Committees. Hearings with the committees begin with posture statements from the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, service Secretaries, and service Chiefs.

Following delivery of the posture statements, detailed hearings involving services' witnesses are held. The end results are annual authorization and appropriations bills passed into law by the Congress. Ideally, this occurs in early July, but delays in passage have run as late as December and January. When appropriations laws are delayed past 1 July, the Congress will pass a joint resolution to provide authority to continue operations, pending passage of the appropriation. This so-called "continuing resolution" authorizes rates of expenditure not to exceed that of the preceding fiscal year. Obligations must also be in consonance with already approved programs.

There are certain controls built into the budgeting process designed to restrict the rate of spending to quarterly or other periodic bases. This is to prevent overexpenditures, and such controls exist at all levels, down to the lowest cost center in the smallest military units.

A technique well known to many of us is sometimes used by OSD to restrict the flow of funds into the economy and to control programs. This is called *deferment.* An excellent example occurred a few years ago when Congress approved construction of an aircraft carrier that Secretary McNamara did not particularly want. He simply deferred con-

struction of the carrier until later in the budget execution period. Although carrier construction was eventually started, it was almost a year later than Congress and the Chief of Naval Operations had hoped for.

Summary. Perhaps the quickest way to recap the PPBS process is for the reader to review *figure 2.* While retracing each step in the 18-month cycle will probably be necessary to achieve a complete understanding of the process, the brief description of the steps provided below may be helpful.

The PPBS concept is relatively simple, but the enormity of the Defense Establishment and the size of its budget generate a very complex operation indeed. The process is still in evolution, so perhaps it will become less complex as time goes on. There is hope, as PPBS already has undergone major improvements since its inception in 1961. Chief among these have been:

- *Earlier fiscal guidance,* allowing services to make more realistic plans, thus more nearly achieving their own force mix, with fewer OSD cuts at the end of the cycle.
- *More analyses by the services,* contributing even further to decentralization of the decision process.
- *A larger role for JCS,* with influence in the decision process throughout the cycle.
- *The cycle lengthened to 18 months* (from 12). Allows more time for dialog between OSD and the services and for slippage of some events. The crunch near the budget submission deadline is still there, but with fewer trade-offs to resolve at that point in time.

The system is the best we have had to date, but it is far from perfect. To those officers working with PPBS now, many of its imperfections seem almost insurmountable, but the opportunities for innovation are unlimited, providing a real challenge to military managers. Among the many unanswered questions about the PPBS, the following are particularly frustrating:

- What machinery do we need to insure that all programming documents reflect the Chief of Naval Operations' decisions as soon as they are made? Some form of POM, updated daily by the computer, may be the answer. As the system is working now, we sometimes have to cancel previous Chief of Naval Operations' decisions to get new decisions in. The other services have the same problem.[11]
- How can we revise the PPBS to have dialog with the Secretary of Defense within reasonable time constraints? In spite of the niceties of the 18-month schedule, hard decisions are often delayed to the point where they must be made within a relatively short

I	- *JSOP I*	JCS concept of military strategy and force planning guidance
II	- *POL/PLNG GUIDANCE*	Secretary of Defense strategy for PPBS
III	- *JSOP II*	Force objectives required to support strategy
IV	- *PPGM*	Secretary of Defense lays out his priorities, puts constraints on total obligations authority and expenditures by Major Mission and Support Categories
V	- *JFM*	Recommendations from JCS on the joint force program within fiscal guidance of PPGM
VI	- *POM*	Total military department resource requirements within parameters of PPGM and JFM
VII	- *PDM*	Secretary of Defense decisions on POM's and JFM
VIII		Military Department Budget Submissions

time with as little as 24 to 48 hours for appeal.[12]

• How do you program a full-scale war? Wartime requirements are unpredictable, costs tend to become secondary because of the need for forces to fight the war, and budget constraints are removed. That just about knocks programming into a cocked hat!

In the conclusion, let me borrow a statement from one of the current PPBS experts in OPNAV:

> The effort involved in planning, programming, and budgeting is tremendous. The system transitions from mission and threat analysis, through force requirements determination, thence to planning of the phasing of men, money and material resources needed to provide and sustain the military forces, and finally to the detailed annual procurement of such resources. The number of people and the amount of formal and informal communications involved are incalculable. Military, financial and political pressures are daily apparent. But to the extent that we fail to express real requirements, or that we inaccurately measure costs or phase procurements, we lessen our capability to apply force at the time and place where it is needed.[13]

BIOGRAPHIC SUMMARY

Capt. Charles F. Rushing, U.S. Navy, is a graduate of the U.S. Naval Academy and holds a master's degree in management from the U.S. Naval Postgraduate School, Monterey, Calif. As a naval aviator he has served in patrol planes and a carrier based antisubmarine squadron, his most recent duty being as Commanding Officer of Antisubmarine Squadron 31 and subsequently as Air Officer in the U.S.S. *Wasp* (CVS-18). He has had duty as an analyst for the Fleet Intelligence Center, Pacific, and for the Department of the Navy Program Information Center (DONPIC) in the Office of the Chief of Naval Operations (OP-90). Captain Rushing recently served as Plans Officer for the College of Naval Command and Staff and is now serving as Head, Air ASW Branch of the Undersea and Strategic Warfare Development Division, Office of Research and Development, Test and Evaluation, OPNAV (OP-981E).

FOOTNOTES

1. Source unknown.
2. Charles J. Hitch, "Retrospect and Prospect," *A Modern Design for Defense Decision* (Washington: Industrial College of the Armed Forces, 1966), p. 114.
3. *Ibid.*
4. Robert S. McNamara, "Decision Making in the Department of Defense," *A Modern Design for Defense Decision* (Washington: Industrial College of the Armed Forces, 1966), p. 22.
5. Hitch, p. 71.
6. Charles J. Hitch, "Development and Salient Features of the Programming System" *A Modern Design for Defense Decision* (Washington: Industrial College of the Armed Forces, 1966), p. 72.
7. Source unknown.
8. President of the United States, Executive Order No. 68-9, 12 April 1968.
9. R.R. McKechnie, "The Planning, Programming, and Budgeting System—an Overview," DONPIC Handout, 2 August 1971.
10. *Ibid.* Most of this section adapted from this source.
11. Cornelius F. Moul, "A System for Planning, Programming, Budgeting, and Control," Lecture, U.S. Naval War College, Newport, R.I.: 14 September 1971.
12. *Ibid.*
13. McKechnie.

Ψ

THE MAKING OF A NAVALIST:

SECRETARY OF THE NAVY

BENJAMIN FRANKLIN TRACY AND SEAPOWER

While much has been written about the influence of Alfred Thayer Mahan upon U.S. naval policy and ship construction in the late 19th century, the very real contributions of others in these same fields have been largely overlooked. Without discounting Mahan's role as a publicist, it was the smalltown lawyer Benjamin Franklin Tracy, Secretary of the Navy from 1889 to 1893, who worked tirelessly, overcoming administrative bottlenecks, interservice rivalries, personality conflicts, and political obstructions to plan and build the new generation of ships needed to make Mahan's vision of the United States as a modern world seapower a reality.

An article prepared

by

Dr. B. Franklin Cooling

> The sea will be the future seat of empire. And we shall rule it as certainly as the sun doth rise! To a preeminent rank among nations, colonies are of the greatest help!

The sentiment is Mahanite; yet such words did not emit from the mouth of Alfred Thayer Mahan. Rather, they came from Benjamin Franklin Tracy, Secretary of the Navy from 1889 to 1893--the public official who elevated to official policy the thoughts expressed somewhat later by the feisty naval intellectual.[1] They reinforce the caution lest we attach sole influence to Mahan in the renaissance of American naval power in the late 19th century. There were other principals--in and out of uniform and especially a series of civilian Secretaries--who also postulated the doctrine of seapower and national grandeur upon *mare liberum*.

The doctrine of seapower was hardly original with Mahan; certainly the British Admiralty had followed such strategic principles for centuries. Then too, numerous politicos and naval officers in the United States had discussed such a concept for several decades. Willing proponents of seapower in the late eighties included Senator Eugene Hale; Congressmen Charles Boutelle, who chaired the House Naval Affairs Committee, and his lieutenant Henry Cabot Lodge; as well as Rear Adm. Stephen B. Luce, father of the Naval War College; Mahan; and Commodore James G. Walker, Chief of the Bureau of Navigation. Yet nowhere was anything spelled out clearly in official policy statements. The role of the Navy remained but hazily defined for most citizens and professionals alike. Stated succinctly, as Luce saw it in 1889, no

Secretary of the Navy had yet proposed the creation of a fighting fleet.[2]

There is reason to believe that strategic fears rather than economic motivation formed a prime mover in the series of events which one observer has styled "the American naval revolution."[3] It would seem that Mahan possibly overemphasized the economic motivation of seapower—at least in this regard. The emergence of his philosophical speculations coincided fortuitously with the return to political power on the Potomac of an intensely nationalistic Republican administration. There were, admittedly, definite signs of a burgeoning interest in overseas markets and other trappings of an expansionist-imperialist theory abroad in the land. But, Mahan's theory that the United States would possess a real fleet only when the revival of her merchant navy demanded protection, placed the cart somewhat before the horse.[4] Fears for national security played a greater part than Mahan anticipated in the creation of a "new navy." Here it was Luce and Secretary Tracy who formed the principal cast.

Benjamin Franklin Tracy fit the pattern of late 19th century Cabinet appointments. A smalltown lawyer reared in upstate New York, Tracy rose to fame on the tide of successful Civil War service—he commanded a regiment in combat, administered the sensitive Draft and Prison Rendezvous at Elmira, and was brevetted Brigadier General of Volunteers for service to the Union.[5] Resettling in Brooklyn after the war, his lucrative legal practice and stalwart labors as a lieutenant in the Republican State machine of Thomas C. Platt attracted the attention of national party leaders. His handsome appearance, engaging personality, and astute intellect combined with a blending of idealism and pragmatism to equip him for an important role in national affairs. When President Benjamin Harrison needed a compromise Cabinet appointment from the Empire State, he tapped Tracy.

Nevertheless, Tracy was a landsman and he knew little about nautical affairs when he assumed his post in March 1889. Students of administrative history have observed bluntly that the Navy and War Departments were always the most difficult to administer for the lawyer or politician. This was due to the average civilian's lack of understanding the standards of value, traditions, prejudices, and eccentricities of the professional military class.[6] They have pointed to the particular complexities of the Navy Department wherein manufacture, naval architecture, steam engineering, scientific enterprise, naval education, international law, medicine and surgery, astronomy, and hydrography all fell within the province of the Secretary's charge. Lacking the covey of experts which surround Cabinet officials today, the late 19th century Secretary hardly had time during his usually short term of office to learn the routine of duties, sift the advice of subordinates, or cope with the myriad undulations of service rivalries, technological changes, and personality differences within his department. For all the Secretaries of the period—War or Navy—Woodrow Wilson's comment on President Grover Cleveland's second Secretary of War, Daniel Lamont, was most apt:

> There can be no reasonable doubt about his ability to administer the War Department with success as there would have been little doubt about his ability to occupy almost any other high administrative post with credit and efficiency. The only criticism which his appointment prompts is, that he was, so far as we are able to ascertain, no more fitted for the War Department than for any other. He is, in short, simply a very capable man of unusual executive talents. He has no special training to be war minister.[7]

Tracy was certainly no different

from Lamont. Yet, a confirmed nationalist from the start, he was to emerge while in office as an ardent Darwinian, navalist, and expansionist. The transformation took time, and it was influenced by contact with Congressmen over brandy in Washington drawing rooms and naval professionals in the stuffy meeting rooms of the State, War, and Navy building. Such individuals were persuasive men concerned with larger policy, and they appreciated the Navy's needs and understood the implications of seapower. Moreover, the naval Bureau Chiefs, while chary of their prerogatives within the corporate structure of the Department, knew well how to sail close before the prevailing political winds on Capitol Hill. So Tracy watched and listened and toured the naval facilities along the Atlantic coast during his first 6 months in office. At that juncture he became exposed, perhaps, to the thoughts of Mahan, but more importantly, to those of Stephen Bleeker Luce.

Luce had been urging various naval reforms for some years before Tracy's arrival upon the scene.[8] He had pushed for proper training of crews and officers to man the complicated new warships. He had founded the War College at Newport in order to broaden the professional horizons of the top command, and he had pointed the proper course for Mahan's first hesitating steps as a naval historian. Moreover, he had stressed repeatedly the requirement to prepare for conflict in times of peace. But in July 1889—just as Secretary Tracy was still undergoing his shakedown cruise in office—Luce published an article in the *North American Review* which may have caused greater reverberations for the development of official U.S. naval policy in the era than the subsequent work of Mahan.

Luce's tract was entitled "Our Future Navy," and it was republished in the *Proceedings of the United States Naval Institute* so that it would reach a larger professional audience.[9] It plumbed the demand for a Navy capable of meeting the battle fleet of any potential enemy on equal terms. Luce pointed especially to the announced intention of the British Admiralty to construct 70 new warships, including 10 battleships and 60 cruisers, over the period 1889-1894. He decried the lack of any comparable "battle" vessels in the U.S. Navy. Calling a Navy a sort of sea army, the flag officer claimed:

> We are building cruisers of various sizes, which correspond to the cavalry and light artillery of the land army; and we have monitors for coast and harbor defence, which supplement our fortifications; but we have no battleships to correspond to the infantry of the line, which constitutes the main strength of the line of battle.[10]

In short, the battleship was the keystone of the Navy; since the United States possessed no battleships, said Luce, she really had no Navy!

Yet, Luce wanted more than a mere collection of miscellaneous fighting ships. Citing historical precedent—thereby predating Mahan in print—Luce saw the Navy's duty as offensive and requiring balanced fleets of battleships, torpedo boats, depot and hospital ships, in addition to the independent cruisers. Pointing to the earlier seapower of the Nation—a squadron of 10 ships of the line that were equal to any in the world—he thought the new steel Navy of the United States could make no comparable claims. Indeed, it might require another decade before "we may begin to talk about 'rehabilitating' the navy without provoking a smile of derision." Meanwhile, said Luce, a solitary American steel cruiser with "its delusive prefix of 'protected' represents the latent possibilities of a great country placidly awaiting some national disaster to generate its mighty forces."

Secretary Tracy did not share Luce's pessimism. He set to work immediately on the problem when he became aware of the admiral's article. He appointed a so-called "Policy Board" to consider and recommend the policy which the department should follow in the next phase of the New Navy program. He charged the group with answering questions relating to leadtime for fleet construction, number and classes of vessels "both for cruising and for coast defense purposes," annual and aggregate cost of the fleet project, and finally the number and classes of vessels which should be requested from Congress in the next session.[11] Navy professionals and the Nation's press generally praised this unprecedented move to bring unity into policy planning.

Tracy also returned Mahan from his exile on the Pacific coast where that officer had been searching for navy yard sites. He assigned him to Newport as President of the War College. It remains doubtful that Mahan immediately joined top naval circles in Washington. But the Secretary probably felt this eccentric officer was too valuable to the job of policy codification to waste on site surveys. He wanted him close by for consultation and advice as to clarity of expression necessary for public understanding of the Navy's plans and policies.

Finally, Tracy directed the Chief of the Bureau of Navigation to form the Navy's first "squadron of evolution" in the early fall. On 18 November 1889, Commodore James G. Walker took the nucleus of a permanent American fleet out of New York harbor. The four gleaming white ships scarcely formed a fighting fleet, but they were designed to provide practical application for the strategic and tactical principles under study at Newport.[12]

Tracy completed the initial phase of policy reorientation and submitted his first annual report to President Harrison just before Thanksgiving. This provocative document provided more than the usual recitation on the state of the sea service. It also contained proposals which represented a dramatic shift in naval policy. Furthermore, it codified the significant strands of new navalism as advanced by Luce and Mahan. Cited by modern observers as "one of the most forceful documents in the entire history of American naval policy," the Secretary's annual report for 1889 was a direct attack upon the weakness of the U.S. Navy.[13]

The Secretary opened his barrage with the remarkably modern observation that "at no previous time in the present century has the country been so relatively powerless at sea." The Navy of makeshift, obsolete wooden ships, useless monitors left over from the Civil War, as well as the eight steel cruisers of the "protected" class, ranked but 12th among the world powers, falling behind even Turkey, China, and Sweden, not to mention the superpowers of the day—Great Britain, France, Russia, and Germany. The sterile program of constructing unarmored cruisers could not hope to provide adequate defense for an unprotected American coastline of 13,000 miles with 20 centers of population, wealth, and commercial activity. Tracy wanted a more powerful deterrent force afloat—a fighting force of "seagoing battleships," coast defense vessels, fast armored cruisers, torpedo boats, and other auxiliary ships. Such a force would conduct a defense of American shores, but by raising blockades, beating off the enemy's fleet far out at sea, and even carrying combat to the enemy's coastal waters, rather than *guerre de course.*

The New York Republican denied such notions represented a policy of aggression. Rather, it was simply a sound business proposition of protecting property and trade not only for coastal centers of commerce, but also for production centers of interior America. To lawyer Tracy:

> The annual increase of wealth in this country is estimated to equal that of England, France, and Germany, and before it can create an effective navy its population is certain to exceed that of any two of these powers combined. Such a nation cannot be indifferent to events taking place in close proximity to its coasts, threatening the freedom of its commerce and the security of its sea-ports.[14]

The Secretary felt that the security provided by an enlarged, reconstituted fleet was but a small price to pay to insure survival. He predicted that future naval wars would be short and sharp. They would be fought with the force-in-being at the opening of hostilities. Tracy closed his preamble with the statement: "The nation that is ready to strike the first blow will gain an advantage which its antagonist can never offset, and inflict an injury from which he can never recover."[15]

Tracy then turned to specifics which might be understood by budget-conscious Congressmen. He wanted a balanced armored fleet of 20 battleships, 20 coast-defense ships, 60 fast and armored cruisers, a line of fleet merchantmen for coaling and transport service as well as possible duty as auxiliary commerce destroyers, and a large number of torpedo boats. This force would be organized into two fleets of battle-ready warships, one for the Atlantic and Gulf coasts, and one for the Pacific. To round out his package for modernization of the Navy, Tracy asked that the War College be given independent command status, that more overseas bases be acquired to service the fleets, that the Revenue Marine (predecessor to the Coast Guard) be transferred to Navy control, that further administrative streamlining be authorized for the main department, and finally, that enlisted personnel conditions be improved and sponsorship of State naval militia be undertaken. He ended his plea on a Luce-like note by declaring:

> Until the United States has a fleet of twenty battle-ships with coast-defenders, cruisers, and torpedo-boats in suitable proportions for efficient defense, and an establishment in such working order, as to administrative machinery, officers, men, reserves, and vessels, that it can be brought without delay into effective action, the country can not consider that it possesses a Navy; and a Navy it can never afford to be without.[16]

Public response to Tracy's advocacy of seapower was mixed as navalists, Congressmen, and citizens of seaboard States, as well as ardent nationalists in Government closed ranks against the Populists, isolationists from the Midwest, and even naval traditionalists who urged the more economical package of harbor defense monitors and coastal fortifications. The situation was hardly ameliorated by the Policy Board's report which appeared in January 1890. This report, which reflected purely naval professionals' ideas, called for an armada of 497,000 tons costing $281.5 million with 10 "offensive" battleships having a 15,000 mile cruising range, 25 "defensive" capital ships of more limited range, a supporting force of 24 armored cruisers; 15 lighter "torpedo cruisers," five miscellaneous ships for China service, 10 rams, three depot ships, and 100 small torpedo boats.[17] Such a program would have placed the U.S. Navy second only to that of Great Britain, and it was far too ambitious to be supported by the American people at that time. The naval professionals apparently sought overkill, and even the enthusiastic Tracy had to publicly repudiate such ambitious schemes lest Congress veto all naval construction programs.

The old adage that members of the executive branch propose but only Congress can dispose was clearly borne out

in the heated debates over the naval appropriations bill early in 1890. When finally enacted, Congress granted the Navy three vessels of 10,200 tons each armed with four 13-inch, eight 8-inch, and four 6-inch guns—styled "seagoing coastline battleships"—with a coal capacity for merely 5,000 miles. The politicians also provided for a light torpedo boat and a cruiser with heavy guns and armor yet sufficient coal endurance to steam around the world without refueling.[18] Overall, compromise was the order of the day. Yet these ships were products of a moment when American policy was shifting from the old strategy of *guerre de course* and harbor defense to one embracing seapower. The authorized vessels reflected the hard work of Tracy, Speaker of the House of Representatives Thomas B. Reed, and the chairmen of the Naval Committees in both Houses, Congressman Boutelle and Senator James D. Cameron.

Tracy did not relax his efforts with the enactment of the Naval Appropriations Act on 30 June 1890. Until the end of his term in office, he sought to translate the doctrine of seapower into practical applications of modernization and reform. He sponsored elaborate experimentation with new armor plate and then effectively negotiated with Andrew Carnegie for the first successful fabrication and delivery of large high-grade forgings, nickel steel, and introduction of the Harveyizing process for hardening steel into the United States. The ambitious Cabinet officer instituted administrative instruments for coordinating Bureau Chiefs, and his continued patronage of the Naval War College rescued that institution from possible extinction. Equally important, his aid to the State naval militia movement and his removal of the navy yards from political patronage reflected his managerial skills which had been acquired through years of experience in dealing with people.[19]

Then too, Secretary Tracy gave the Navy some practical lessons in the use of seapower by means of his dabbling in cruiser diplomacy. His search for naval bases in Haiti and Santo Domingo, saber-rattling with Great Britain over the sealing question in the Bering Sea, and his brinkmanship tactics in the Chilean affair all reflected Tracy's ability to project seapower as an arm of national policy and grandeur.[20] Professional and philosophical rapport with President Harrison coupled with the poor health of Secretary of State James G. Blaine enabled Tracy to substitue his own counsel for that of the Maine statesman as the top Presidential adviser. Tracy sent naval vessels to the Caribbean, directed the formation of a strategy board with Mahan and Assistant Secretary James R. Soley as members to formulate operations plans for war with Chile, and the Secretary personally directed the stateside preparation of a "battlefleet" for an expedition against that South American Republic. Small wonder then that he emerged as a principal proponent of the art of employing American seapower in that day. When an unfriendly press pointed to the belligerence of Tracy's moves against Chile, the aghast official responded:

> I did not know I was a war man; I rather thought I was peaceably inclined, but I am also inclined to maintaining the dignity of the United States government and its power to protect its civilians, soldiers, and sailors when abroad. If that leads to war, then I am for war; if it leads, as I believe it will, to peace, then I am for peace.[21]

Tracy continued to speak out on the need for naval preparedness. His second annual report included a possible scenario befitting later portrayals of possible nuclear holocaust wreaked on this country, His depiction of the descent of an enemy fleet upon New York City included graphic descriptions of shattered communications, ruined buildings,

the onset of famine, and the extraction of a huge ransom all because of the absence of a battlefleet. "Nothing short of a force of battleships, numerous enough to be distributed in the separate fields of attack and able to concentrate on any threatened point within their own field, will prove a complete protection," preached the naval official.[22]

Finally, Tracy made an exhaustive summary of seapower progress since 1889 when he compiled his last report as a lame duck administrator after the 1892 elections had ousted the Harrison government from power. He noted that in 1889 no more than three modern steel vessels, aggregating 7,863 tons and mounting thirteen 6-inch and four 8-inch guns, comprised the first line of national defense. By comparison, the Harrison administration added to the Nation's protection some 19 additional vessels with an aggregate tonnage of 54,812 tons, mounting altogether two 12-inch, six 10-inch, sixteen 8-inch, and eighty-two 6-inch guns with some 18 additional vessels due for completion within the year. Naturally, these statistics were deceptive, for Tracy's tenure merely witnessed completion of ships authorized under previous administrations. Yet the continued pressure to get the job done and launch the vessels could be attributed to Tracy, and he graciously admitted that the Navy "has become a great national interest, which should receive the support of patriotic men, whatever their political faith."

None of the recital of progress prevented Tracy from finishing his report with a warning. The Nation could ill afford to let down its guard since: "The aggressive policy of foreign nations has continued, and this country will soon be forced into a position where it cannot disregard measures which form a menace to its prosperity and security."[23] With that, Tracy heartily reiterated the views of fellow navalists in Congress who earlier had announced: "Our true naval policy for the future is to construct hereafter, principally if not entirely, only first-class cruisers and first-class battleships, with their accessories."[24]

Tracy shaped something of a naval revolution by his espousal of a two-ocean battlefleet, adequate to the task of destroying an enemy force at sea. Based upon the ideas of Rear Adm. Stephen B. Luce and Capt. Alfred Thayer Mahan, Tracy's crusade ran counter to the traditional notions of American seapower and an isolationist bloc in Congress. It was a tribute to the Secretary's political acumen and perseverance that a nascent battlefleet lay on the construction ways by 1893. Tracy emerges from the period as a machine politician whose sense of national service enabled him to rise above petty politics. Policy revolutionist, shrewd manipulator in business negotiations with steel scions, reformist administrator, and Presidential confidant—Benjamin Franklin Tracy rose from humble rural beginnings to help move the U.S. Navy from the days of "wooden ships and iron men" into the modern world of seapower with its deterrent forces and complex weapons systems.

BIOGRAPHIC SUMMARY

Dr. B. Franklin Cooling did his undergraduate work at Rutgers University and earned his master's and doctorate in history from the University of Pennsylvania. He has served as Park Historian with the U.S. Department of the Interior, as National Defense Historian with the Office of the Chief of Military History, U.S. Department of the Army, and continues as Curator of the U.S.S. *Olympia* (preserved in Philadelphia) and as a member of the editorial staff of *Military Affairs*. Dr. Cooling is currently the Chief of Research Studies, Military History Research Collection, Carlisle Barracks.

FOOTNOTES

1. *New York World,* 26 November 1891, as quoted in Walter R. Herrick, Jr., *The American Naval Revolution* (Baton Rouge: Louisiana State University Press, 1966), p. 107. Other useful studies of Tracy's Cabinet service include John K. Mahon, "Benjamin Franklin Tracy, Secretary of the Navy, 1889-1893," *New York Historical Society Quarterly,* April 1960, p. 179-201; and Benjamin F. Cooley, "Benjamin Franklin Tracy; Lawyer, Soldier, Secretary of the Navy," Unpublished Ph.D. Dissertation, University of Pennsylvania, University Park, Pa.: 1969.

2. Herrick's work overemphasizes Mahan's influence upon Tracy, but the perspective was broadened in Robert Seager II, "Ten Years Before Mahan: the Unofficial Case for the New Navy, 1880-1890," *Mississippi Valley Historical Review,* v. XL, (1953-54), p. 491-512.

3. Herrick, p. 11.

4. John A.S. Grenville and George B. Young, *Politics, Strategy, and American Diplomacy* (New Haven: Yale University Press, 1966), p. 34-35.

5. Tracy received a Congressional Medal of Honor in 1895 for gallantry in the Battle of the Wilderness although it is by no means clear that such an award was not more a bipartisan gesture for the New Yorker's public service as Secretary of the Navy.

6. Leonard D. White, *The Republican Era: a Study in Administrative History 1869-1901* (New York: Macmillan, 1958), p. 155; and Charles O. Paullin, *Paullin's History of Naval Administration 1775-1911* (Annapolis: United States Naval Institute, 1968), p. 328 passim.

7. Woodrow Wilson, "Mr. Cleveland's Cabinet," *Review of Reviews,* v. VII, p. 291.

8. A useful guide to Luce's published ideas appears in John D. Hayes, "The Writings of Stephen B. Luce," *Military Affairs,* Winter 1955, p. 187-196.

9. Stephen B. Luce, "Our Future Navy," *Proceedings of the United States Naval Institute,* v. XV, no. 4, (1889), p. 541-559.

10. *Ibid.,* p. 542.

11. Secretary of the Navy to Commodore W.P. McCann [President], July 16, 1889 printed as Appendix A to U.S. Congress, Senate, *Letter from Secretary of the Navy in Compliance with Senate Resolution of January 27, 1890,* transmitting Report of the So-called Policy Board, Senate Executive Document 43, 51st Congress, 1st Sess., 29 January 1890.

12. U.S. Navy Department, *Annual Report 1889* (Washington: U.S. Govt. Print. Off., 1890), p. 35.

13. Herrick, p. 54-55, and cogent portions of the report have been reprinted in Walter Millis, ed., *American Military Thought* (Indianapolis: Bobbs-Merrill, 1966), document 26, p. 226-239.

14. U.S. Navy Department, p. 5.

15. *Ibid.*

16. *Ibid.,* p. 49-50.

17. "Report of the So-called Policy Board" as reprinted in *Proceedings of the United States Naval Institute,* v. XVI, 1890, p. 206-209, 211.

18. "Naval Appropriations Bill," *U.S. Congressional Record,* v. XXI, 8 April 1890, p. 3169-3170.

19. Herrick, p. 44 passim; Mahon, p. 189, 192-200; and on armor procurement, Cooling, chap. 7.

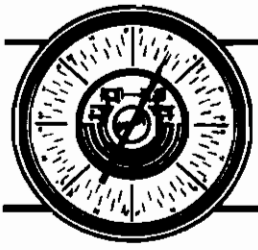
20. Walter Le Feber, *The New Empire: an Interpretation of American Expansion 1860-1898* (Ithaca, N.Y.: Cornell University Press, 1963), p. 110 passim; and Herrick, chaps. 5 and 6 especially.

21. *The New York Times,* 30 January 1892.

22. U.S. Navy Department, *Annual Report, 1890* (Washington: U.S. Govt. Print. Off., 1891), p. 40.

23. *Ibid.,* 1892, p. 37.

24. *Ibid.,* citing 52d Cong., 1st Sess., HR 621, Appropriations for the Navy, 10 March 1892, p. 15.



THE BAROMETER

Lieutenant Commander Wyttenbach and Lieutenant Commander Strasser are certainly to be commended for having undertaken the Herculean task of surveying the future of the international political scene in their laudable article "The Future Course of World Politics, 1972-1987," appearing in the May issue of the *Review*. They have dealt with a highly subjective topic in a most objective way, and their thoughts certainly provide food for discussion amongst all interested in or concerned with world affairs.

Since the art of crystal-ball gazing is a highly speculative one, perhaps some further thoughts will give a slightly different tint to the international canvas that Lieutenant Commanders Wyttenbach and Strasser have already colored so well.

One could contend that within the period of the next 15 years there will be five superpowers as opposed to the three—United States, Soviet Union, and China—that the authors project. A nuclear Japan, ably forecast in the article, and Western Europe might well be the other two.

In Europe, an already strong integrated economy within the EEC is soon to be strengthened even further by the addition of Ireland, Britain, Norway, and Denmark. The fact that economic integration has to date proven so successful has practically compelled the British and others to join the Common Market. The existence and functioning of the Eurogroup in the councils of NATO, the recent agreements with regard to currency stabilization within the EEC designed to work gradually toward a common currency for all Community members, the willingness of the strong currency members (West Germany, the Netherlands, France) to help Britain and Italy meet their obligations under present currency stabilization accords, the recent accord to build complementary arms industries and markets within a pan-European context, and the frequent meetings of EEC foreign ministers to attempt a common approach to foreign problems of mutual interest all presage a more integrated Europe in terms of economic capacity, defense, and foreign policy. Every effort will be made within Western Europe to provide a closely integrated regional structure based on a Bonn-London-Paris axis, with Rome playing a greater role than today if Italy achieves greater governmental stability. As is noted, national identities will be retained, but Europe as a whole will become a force more and more to be reckoned with and equal to the superpowers in every measure of strength (political, armed, and economic). The process will take time, but it seems highly likely to succeed.

True, Germany will likely remain divided, but the prospect of an independent nuclear Germany does not appear to be in the cards. Nothing would prove more destructive of the carefully built milieu of détente in Europe than a nuclear armed Germany. Neither the Soviet Union nor the powers in Western Europe would welcome a Germany independently possessing nuclear weapons or a Germany pursuing a foreign policy largely out of tune with the rest of the

alliance. Either eventuality would prove greatly destabilizing, and the Germans as well as others recognize this fact. German reunification can only be achieved after a long period of negotiation and accommodation in an environment of greatly decreased tension between East and West. We may be on the threshold of just such an era when every effort will be bent toward the creation of genuine détente. For the present, Bonn appears temporarily to have shelved the prospect of a reunified Germany in the near future by ratifying of the Berlin accord and the Soviet and Polish treaties. Nevertheless, German reunification will remain a long-term goal for the leaders in Bonn. A nuclear armed Germany would only destroy this first attempt at an East-West *modus vivendi.* Although it is not too difficult to envision a greater German voice in nuclear affairs within NATO and within a growingly unified Western Europe, the prospect of an independently nuclear armed West Germany seems dim at best.

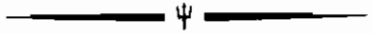
Similarly in the Far East, Japan will come to play an increasingly powerful role. The recent Sino-American rapprochement and the strictures placed on imports from Japan by the United States coupled with the forced revaluation of the yen have cast a new light on Japanese-American relations. Japanese reliance on the United States as both a protective shield in defense matters and a guide to foreign policy seems to have suffered a severe blow. Thus, despite the continuing aversion of some sectors of the Japanese public to an increased defense establishment, a nuclear armed Japan seems a certainty in the next 15 years as the authors point out. Extensive Japanese economic interests abroad and most particularly those in Southeast Asia will ensure that Tokyo will play an ever greater role overseas. A new Southeast Asian security arrangement comprising Japan, Thailand, Vietnam, Australia, New Zealand, Indonesia, the Philippines, Malaysia, and Singapore may well replace the current SEATO alliance. The pace of U.S. withdrawal in the Pacific and the perception of U.S. determination to play a strong and consistent role in that part of the world, however, will largely determine the future evolution of power relationship in the Pacific.

The trend of global economic and trade relationships is also of paramount importance in the shaping of international relationships in the near- and long-term future. The prospect of strong economic competition between Europe, Japan, the Soviet bloc, and the United States for markets in the world is a problem requiring the utmost attention and the greatest of economic and diplomatic skills. Future efforts to reorganize the structure of currencies and trade barriers is of prime importance to future political relationships that will have spill-over effects in defense policies. For example, a high EEC tariff barrier to U.S. trade may well prove far more influential in spurring U.S. military withdrawal from the European scene than any actions taken by the Soviet Union or Eastern European countries. If strong economic powers resort to a high degree of economic protectionism resulting in "beggar my neighbor" policies on a grand scale, instability will surely result. Economic policies giving economic competitors the freest possible access to markets combined with realistic international monetary policies are necessary for the future.

The future of world politics, in this writer's view, seems to be incorporated in the concept of five great powers, the United States, the U.S.S.R., China, Japan, and Western Europe (acting within the NATO context and with a large degree of harmony in world political, economic, and defense affairs) acting jointly to preserve the peace and stability of nations in the nuclear age where *force majeur* will to a far lesser degree be the final arbiter of present and future relationships. Wisdom in

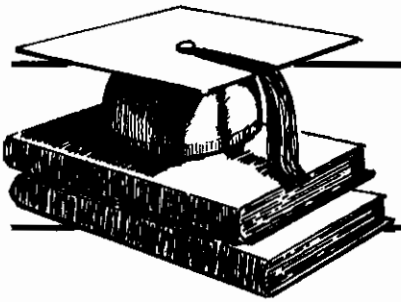
statecraft combined with strong conventional and nuclear deterrent powers at the disposal of each of the five major actors will hopefully give the degree of stability and balance necessary to build a peaceful world.

W. Spencer Johnson
Lieutenant Commander, U.S. Navy



If the skill of a general is one of the surest elements of victory, it will readily be seen that the judicious selection of generals is one of the most delicate points in the science of government and one of the most essential parts of the military policy of a state. Unfortunately, this choice is influenced by so many petty passions that chance, rank, age, favor, part spirit, or jealousy will have as much to do with it as the public interest and justice.

Jomini: Précis de l'Art de la Guerre, 1838



PROFESSIONAL READING

Karsten, Peter. *The Naval Aristocracy: the Golden Age of Annapolis and the Emergence of Modern Navalism* New York: Free Press, 1972. 461p.

Professor Karsten, a young historian and former naval officer, has undertaken a historical and sociological study of the professional naval officer from 1845, the date of the founding of the Naval Academy, to 1925, the year that the permanent Naval Reserve was established. During this period the naval officer corps was, as Professor Karsten suggests, a remarkably homogeneous socioprofessional group knit together by close ties of family, religion, social class, and professional identity. The author explores nearly every aspect of their life and thought, from marriage and family to political and social ideas. Their 19th century roles as diplomats, lobbyists, explorers, publicists, and inventors all come under close scrutiny. Few naval officers will be flattered by the results. The author finds "racism, authoritarianism and warmongering" to be rather widespread among these 19th century leaders of the U.S. Navy.

The officer corps was wealthy, old-stock American, and lily white, with few Baptists or Methodists and fewer Jews. Blacks were employed mainly as stewards and body servants. The American officers aped and admired the British, held other races and peoples in contempt, and believed unswervingly in the "survival of the fittest" among nations. At the Naval Academy the young midshipmen were taught a thorough identification with the service, its reputation, and its interests.

Much, if not all, of the activities of these 19th century officers, Karsten suggests, can be understood as an effort to advance the interests of the Navy and of their own careers in the Navy. On the domestic scene they ceaselessly wrote and lobbied for a larger Navy, while internationally they "earnestly sought an opportunity to demonstrate [their] valor and abilities in combat; an aim which appears to have led [them] to offer force in dubious situations." The naval officers despised the American merchants and missionaries whom, in their role as "policeman of the seas," they were obliged to protect. Nevertheless, they assiduously guarded and promoted American business interests overseas, conceiving them to be identical to "the national interest."

Professor Karsten's thoroughgoing reassessment of Mahan and his role will probably be of great interest to historians. The author points out that concepts such as "seapower" and "control of the sea" were hardly original with Mahan. Neither did his books serve to convert large numbers of people to navalism and expansionism; most of them were already converted. The author strips away the layers of esoteric scholastic commentary, with which scholars have surrounded the admiral's work, to reveal what should have been evident all along: that the *Seapower* books were, first and foremost, an instrument for obtaining a big Navy. "Expansionist ideology was quite agreeable to Mahan . . . But it was the Navy's

growth and prosperity that was the first mover. It was the Navy for which he fought and the Navy, for Mahan, needed no justification." (p. 339)

Although it is an impressive performance, *The Naval Aristocracy* is not without some shortcomings, the most serious being that Professor Karsten, as he frankly admits, simply does not like the officers he is writing about. The result is that, in a few places, the book reads more like an indictment than a social history. In almost every instance, doubtful or ambiguous evidence is resolved in favor of the prosecution. Thus Capt. Percival Drayton's remark that "a little despotism in government is a good thing," is taken as typical of the views of his naval colleagues, while this same officer's very liberal (for the time) views on race relations are presented as quite untypical. Authoritarian, militaristic, or racist remarks by naval officers are presented in the text as typical; more moderate or contradictory remarks by other naval officers are presented in the footnotes as "exceptions." Nevertheless, it would be a mistake to dismiss this book as merely an antimilitary polemic. Professor Karsten is a serious scholar who appears to have waded through every collection of personal papers, every memoir, and every biography pertaining to his "naval aristocracy." On many important points his documentation and the weight of statistical evidence he brings to bear are impressive and quite persuasive. The book will probably stand for a long time as *the* definitive study of the naval officer corps.

The Naval Aristocracy may be taken as indicative of a new trend in military history away from the narrow accounts of battles and the laudatory biographies of great captains. The time has passed when the military profession and its members can expect historians to accept, at face value, their beliefs about the nature and function of their profession. Naval readers who are disturbed by some of Professor Karsten's findings may derive some comfort from the fact that historians are also beginning to examine the lawyers, the Army, the Foreign Service, and the medical profession in the same critical spirit. The indications are that the results will be no more flattering than *The Naval Aristocracy*.

Dr. Ronald Spector
Historian, Current History Branch
Office of the Chief of Military History

Taylor, Maxwell D. *Swords and Plowshares*. New York: Norton, 1972. 434p.

There are two diametrically opposed schools of thought on military professionalism. One school maintains that the job of a military man is not to reason why in matters of foreign policy but to win wars by military means and leave all other considerations to civilians. The other school argues, however, that the military does have responsibilities in the field of foreign policy and should make recommendations on the question of whether or not to use military force.

In a 1969 speech at West Point, Gen. Maxwell Taylor attempted to reconcile these contrasting views. But in his autobiographical *Swords and Plowshares* General Taylor leaves little doubt about which position he espoused in his distinguished post-World War II career as Commander of the 8th Army in Korea, Army Chief of Staff, Military Representative to the President, Chairman of the Joint Chiefs of Staff, Ambassador to South Vietnam, and White House Consultant. Never does the erudite general, publicly or privately, in or out of uniform, express any misgivings about the basic premises of the post-World War II containment policy. Instead, Taylor hails the Truman decision to intervene in Korea as courageous; he studies the Bay of Pigs disaster without even addressing the question of whether the United States should be invading Cuba in the first place; and he makes

numerous trips to Vietnam and serves as Ambassador in that unhappy country without ever once challenging the rightness of our involvement.

Taylor's position on the role of military leaders is very much in the tradition of his predecessors as Army leaders, i.e., Bradley and Ridgway. However, the fact that Taylor emerges in this mold is surprising, and indeed disappointing, because Taylor was supposed to be different than other military men. Indeed, this is precisely why he was brought back into government by the Kennedy administration.

In addition to tracing his career from West Point to Saigon, Taylor also summarizes the lessons of his experience in two concluding chapters entitled "Lessons from Vietnam," and "Adjustments to Declining Power." Those who were disappointed by Taylor's position in the first part of the book will be greatly troubled by his conclusions. The general condemns the policy of gradualism in Vietnam as immoral; advocates that future presidents use military force swiftly and decisively, regardless of the international consequences; laments the fact that negotiation has become the controlling objective of our policy in Vietnam; and lays the majority of the blame for the divisions in our society and the defamation of our institutions on the media.

Nonetheless, the book is valuable for those interested in the attitudes and perceptions of military leaders. Like Lyndon Johnson's *Vantage Point*, Taylor's memoirs are poor history, (e.g., his account of the involvement of the Kennedy administration in the overthrow of Diem), but rich in character insights that make it easier to understand how the United States became immersed in Vietnam.

Lawrence J. Korb
Associate Professor Political Science
U.S. Coast Guard Academy

Tolley, Kemp. *Yangtze Patrol: the U.S. Navy in China*. Annapolis: Naval Institute Press, 1971. 292p.

At a time when the reader is sated with books of China, it hardly seems profitable to recommend yet another. Yet, *Yangtze Patrol* will be of great interest to all naval officers and especially to those who served with the modern-day version of the river patrol in the Mekong Delta. To one unschooled in the annals of naval history, this writer believed the Mekong patrols to be innovative and representative of the modern and flexible Navy, only to find precedent along the Yangtze and in "Mr. Lincoln's Brown Water Navy."

In *Yangtze Patrol*, Rear Admiral Tolley traces the history of the Navy's river gunboaters from the inception of the Yangtze Patrol to its enforced demise at the onset of World War II. The gunboats sailed the inland waters of a foreign land to protect the lives of the many American citizens in China, to protect U.S. commercial interests, and to insure that other foreign nationals gained no advantage over our traders. Even when their useful function ceased in China at the time of the Japanese conquest there, the sailors and gunboats of the river patrol continued to serve in admirable fashion, as a few of their number survived to aid the defense of Corregidor in Manila Bay. Although the Yangtze gunboaters may have found themselves aground many times on the mudflats of the Yangtze, they hardly anticipated that their final grounding would be at Corregidor, with the last of their crews manning the defenses of that stronghold.

The author draws from his own experience as a former river rat to enliven the accounts of his predecessors. He relies mainly on the prolific writings of the gunboaters themselves to enrich and color the account, presenting a bizarre, exciting, and highly readable account of the early American experience in China.

The expansive television coverage of

President Nixon's recent trip to China provided the American viewers with their first public view of China in 20 years, and in the course of the extravaganza there was revealed a new, modern, and efficient China. Admiral Tolley's book describes an entirely different face of the Middle Kingdom. As well as recounting the lives and work of American navy men in China, *Yangtze Patrol* presents an interesting study of the struggle for control of China, particularly between the first revolution in 1911 and the outbreak of World War II. Within this time period China was the scene of almost ceaseless warfare; between the warlords, between the warlords and Generalissimo Chiang Kai-shek, and between Chiang and the Communists. How did the nation survive?

> Battles took place in China only when the contending forces were of equal or nearly equal strngth. When one side outnumbered the other, it was customary for the smaller force to surrender or to join the larger. Foreigners found this philosophy to be very comic, whereas it was in fact proof of the profoundly pragmatic nature of ancient Chinese civilization. Had the ground rules not been such, the loss of life during the generally senseless civil wars from 1911 to 1926 would have been frightful. (p. 128)

The author also describes the confrontation between the Communists and the Nationalists, but the book is not entirely of war. *Yangtze Patrol* is essentially a story of the men and ships of the Chinese river patrols, with all the humor and horror that was the lot of the gunboat crews and their officers.

There is even something in the book for the Marines, with brief descriptions of the actions of the Fourth Marines. Yet, perhaps more interesting is the account of the time that "Brute" Krulak made a slight "miscalculation"; however, he managed to recover with the aplomb for which he was famous.

Yangtze Patrol is an excellent history of an era of naval warfare that is most often the subject of sea stories. The book contains a wealth of material that reads like a novel, yet is fact. It is the type of light history that is easily read and highly interesting.

R.D. AMMON
Major, U.S. Marine Corps

Worcester, George R.G. *The Junks and Sampans of the Yangtze*. Annapolis: Naval Institute Press, 1971. 626p.

Americans generally tend to consider China as a great landmass probably because their impressions of that country are gained from small-scale maps in geography textbooks. Rather, it is a region of great rivers that open this heart of Asia to the sea. These rivers and a long coastline are what make this vast land area a maritime country.

The Jesuit missionary Gabriel Magaillans, in 1688, reported that there were more vessels in China than in the rest of the world together. This is probably still the case. Passenger traffic and the movement of freight is still mainly by junk which, except for the Arab dhow, is the world's only remaining commercial sailing vessel. The dhow is usually an open deck craft with a single lateen sail and is incapable of complex navigation and piloting. The junk, on the other hand, is a sophisticated, unique vessel with battened lug rigged sails, watertight compartmented hull, and, in many cases, balanced rudder. It is a universal type that has been adapted to almost every transport function on sea and river from railroad car ferry to live fish carriers; flower boats and the fufu junks were essential and kept a malodorous balance between city sanitation and rural agriculture in a country that cannot afford domestic animals. Oddly, "junk" is not a Chinese term but a Portuguese adoption of the

Javanese word for ship, "djong." The Chinese term is "ch'uan." The Chinese small boat, "sampan," also has many distinctive functional types. Flat-bottomed, with very shallow draft, about 14 feet long and 4 feet wide, it is propelled by a single scull over the stern or by poles.

Junks and Sampans of the Yangtze has over 900 illustrations, most of them drawings to scale of these craft performing their many functions. There are also charming sketches like that of the five-masted Pechili trader (page 167) and several of the crooked stern junks of the Upper Yangtze. All were drawn by the author himself during his years of field research. Informative footnotes are tastefully placed at the side of the page together with many small photographs and model drawings of seagoing tools and parts. All contribute to making a beautiful book.

This large, folio-sized volume, however, is far more than a definitive work on these unusual sailing vessels. It is also a study of Chinese philosophy in which one gets a sense of this timeless land "just before time there ceased to stand still." It is also a detailed geographical presentation of the world's fifth largest and one of its foremost rivers, the major lifestream of a great continental country. One can follow the river from its estuary near fabled Shanghai to Pingshan, 1,700 miles from the sea, where the Min River joins after its 12,000 feet descent from the plateau of Tibet. A colorful discussion is devoted to the 200 miles from Ichang to Wanshien, and the passage of the famous gorges that divide the Upper River from the rest of the Yangtze. The Chinese proverb warns: "It is more difficult to ascend to Szechwan than to ascend to heaven."

George Raleigh Gray Worcester left the British Navy in 1919 at the age of 29 to become River Inspector in the Chinese Maritime Customs Service. For 30 years he surveyed the Chinese coast and rivers and assisted in opening the Yangtze to steam navigation. He was released from other duties during the last 8 years to devote his time to Chinese nautical research, the result of which is this book, revised from five earlier works of limited circulation. His research was done during one of the most critical periods in China's tumultuous history, and he and his wife spent 3 years in a Japanese prison camp. After World War II he returned to England and served for 7 years as editor of the famed scholarly nautical publication, *The Mariner's Mirror*. He died in 1969, happy in the knowledge that his work would appear in its present form.

JOHN D. HAYES
Rear Admiral, U.S. Navy (Ret.)

Ψ

There is only one way to read a book, to give yourself up to it, alone, without instruction as to what you should be finding in it, without the necessity of making it into a series of points, but enjoying it, coming to know in personal terms what is in the mind of the writer.

Harold Taylor, "The Private World of the Man with a Book," Saturday Review, 7 January 1961

CUMULATIVE INDEX
Volume XXIV

(This index includes the articles in volume XXIV. For earlier articles see *Naval War College Review Index September 1948-June 1968* and June issues of 1969, 1970, and 1971.)

100 NAVAL WAR COLLEGE REVIEW

Hallam, Orval K. Capt., USN. "The Need for a New U.S. Policy Toward Cuba in the 1970's." March 1972.

Hamilton, William A. III, Lt. Col., USA. "The Decline and Fall of the Joint Chiefs of Staff." April 1972.

Hartmann, Frederick H. "U.S. Foreign Policy: a Historical Perspective." March 1972.

Hattendorf, John B., Lt., USN. "Technology and Strategy: a Study in the Professional Thought of the U.S. Navy, 1900-1916." November 1971.

Hayden, Eric W., Lt., USNR. "Soviet-American Arms Negotiations—1960-68: a Prelude for SALT." January 1972.

Hayes, John D., Rear Adm., USN (Ret.). "Admiral Joseph Mason Reeves, USN (1872-1948): Part II—1931 to 1948." January 1972.

Heine, Irwin M. "Soviet Maritime Policies." October 1971.

Hutton, C. Powell, Maj., USA. "Changing Soviet Oil Interests: Implications for the Middle East." October 1971.

Jacobsen, Carl G. "The Soviet Navy: Acquiring Global Capabilities and Perspectives." March 1972.

Johnson, William S., Lt. Comdr., USN. "Naval Diplomacy and the Failure of Balanced Security in the Far East—1921-1935." February 1972.

Korb, Lawrence J. "The Secretary of Defense and the Joint Chiefs of Staff: Conflict in the Budgetary Process, 1947-1971." December 1971.

Levie, Howard S. "Mine Warfare and International Law." April 1972.

Margaritis, C., Vice Adm., Chief, Hellenic Navy. "The Future Roles and Problems of Small Countries' Navies." January 1972.

McKenney, Edward A., Lt., USN. "Mutually Balanced Force Reductions: the Complex Problem." June 1972.

Miller, Gerald E., Vice Adm., USN. "Public Law and the Military Commander: Responsibility and Authority." October 1971.

Miller, William O., Capt., JAGC, USN. "Law of Naval Warfare." February 1972.

Pitt, William M., Lt. Comdr., USN. "The Use of Seapower in Countering the Strategy of Interposition." September 1971.

Probert, John R. "The Reserves and National Guard: Their Changing Role in National Defense." May 1972.

Ra'anan, Uri. "Soviet Global Policy and the Middle East." September 1971.

Roberts, John M., et al. "Action Styles and Management Game Performance: an Exploratory Consideration." June 1972.

Rosser, Richard F., Col., USAF. "American Civil-Military Relations in the 1980's." June 1972.

Rostow, Walt W. "Will We Snatch Defeat from the Jaws of Victory?" September 1971.

Sargent, Clyde B. "The Chinese Mind: a Probing and Exploration." January 1972.

Scoggins, Marvin C., Capt., USN, ed. "A Response to Z-Gram 62." College of Naval Warfare Report. September 1971.

Semmes, B.J., Jr., Vice Adm., USN. "A Perspective for the 1972 Global Strategy Discussions." June 1972.

Sheehan, Neil. "The Press and the Pentagon Papers." February 1972.

Shimkin, Demitri B. "India—an Economic Failure or a Potential Superpower?" May 1972.

Shreckengost, Raymond C., Col., USMCR, "Science, Technology, and Change: Implications for the Navy." November 1971.

Shreckengost, Raymond C., Col., USMCR. "Technology and the Establishment." March 1972.

Simpson, Benjamin M. III, Lt. Comdr., USN. "Current Strategic Theories." May 1972.

Smith, Margaret Chase. "Graduation Address." September 1971.

Smith, Wayne J., Lt. Comdr., USN. "International Control of Deep Sea Mineral Resources." June 1972.

Under all circumstances, a decisive naval superiority is to be considered a fundamental principle, and the basis upon which all hope of success must ultimately depend.

George Washington: Letter, 1780